

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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LONDON, SATURDAY, DECEMBER 19, 1874.

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MR. JAMES H. CROFTS, STOCK AND SHARE BROKER,
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.
(SUCCESSOR TO JAMES CROFTS).
Established 1842.

BUSINESS transacted in every description of BRITISH AND FOREIGN Stocks and Shares, and in all COLLIERIES and IRON SHARES.
SPECIAL BUSINESS in shares not having a general market value.

SPECIAL DEALINGS in the following. Buyers or Sellers will find it advantageous to communicate:—

Bampfylde.	Javall.	Prince of Wales.
Bilson and Crump.	Nant-y-Glo (Pref.).	Positive Assurance.
Briton Medical.	Newcastle Chemical.	Peevor.
Cardiff and Swansea.	Newport Abercrom.	Silkstone Fall.
Chapel House.	New Sharlston.	Sweetland Creek.
Clee Hill.	Palmer's Shipbuilding.	Thorpe's Gawber.
Flagstaff.	(£25 paid).	Tylwyd.
Glaisdale Quarry.	Penstruthal.	Welsh Freehold.
Grogwinion.	Providence.	West Tankerville.
	Parys Mountain.	

Business transacted in all descriptions of MISCELLANEOUS shares.
Bankers: City Bank, London; South Cornwall Bank, St. Austell.

MR. W. H. BUMPUS, STOCK AND SHARE BROKER,
44, THREADNEEDLE STREET, LONDON, E.C.

Transacts business in MINING and COLLIERIES Shares of every description. English and Foreign Stocks, Colonial Government Bonds, Railways, Banks, and Miscellaneous Shares, and all Securities dealt in on the London Stock Exchange, for INVESTMENT or SPECULATION. Business negotiated in Unmarketable Stocks and Shares. Speculative Accounts opened for the Fortnightly Settlement. A Stock and Share List forwarded to bona fide investors free on application.
Bankers: The National Provincial Bank of England, E.C.

W. H. B. has SPECIAL BUSINESS in the undermentioned:—
50 Bampfylde, 2½.
15 Bilson and Crump.
40 Bog, 8s.
25 Birdseye, £2 11s. 3d.
5 Cape Copper, £30½.
110 Chontales, 11s. 9d.
30 Cardiff and Swansea.
50 Chapel House, 24.
20 Cathedral, 18s.
30 Cedar Creek, £1 13s.
150 Clee Hill Colliery.
20 Devon Con., £2½.
2 Dolcoath.
70 Emma (Silver), £1 4s. 6d.
40 East Canard, 20s.
10 East Lovell, 4s.
25 Eberhardt, 2½.
50 East Grenville.
100 Frontino, 8s. 6d.
40 Flagstaff, £1 19s. 6d.
5 Great Lacey, £10½.
25 Hington Down, 24s.
50 Kingston Valley.
25 Last Chance, 18s. 6d.
20 Ladywell, £2 18s.
100 Malabar, 12s.
25 Marke Valley, 39s. 6d.
60 Malpas, 20s. 6d.
25 New Quebrada, £3½.
100 Old Treburgett, 11s.
20 Pennerley, 39s. 6d.
150 Plymington, 3s. 9d.
60 Port Phillip, 18s. 6d.
40 Parys Moun., 10s.
50 Prince of Wales, 10s. 9d.
70 Penstruthal, 14s. 6d.
5 Providence.
100 Rookhope, 12s. 6d.
30 Richmond, £6 13s. 6d.
20 Roman Gravels, £2½.
15 So. Condurow, £4½.
75 Tecoma, 19s. 6d.
15 Tankerville, £8½.
10 Thorpe's Gawber.
1 Tinicroft, £28½.
35 Uni. Mexican, £2½.
5 Van, £21½.
20 Van Consols, £2½.
50 Wheat Grenville, 5½.
60 West Maria, 7s.
20 Westbourne Grove.
Drapery and Furnish.
ing Company, 47.
10 West Chiverton.
20 Welsh Freehold.

MR. E. J. BARTLETT, STOCK AND SHARE DEALER,
No. 30, GREAT ST. HELEN'S, LONDON, E.C., has SPECIAL BUSINESS, at the lowest prices, in—
OLD TREBURGETT.
PARYS MOUNTAIN.
SOUTH CONDURROW.
OLD TALARGOCH.
MINERA (Buyer).
PRINCE PATRICK.
SOUTH TOLCARN.
CARN BREA SHARES.

JOHN RISLEY (SWORN), STOCK AND SHARE BROKER,
77, CORNHILL, LONDON.

Turkish Six Per Cents. of 1854, 1858, 1862, 1865, 1871, and 1873 specially recommended; Wheel Grenville and Treleigh Wood, also Wheel Peevor and Crebor shares.
Business transacted at the following rates of commission:—Foreign Stocks, ½ per cent.; and Mining Shares of £4 each and upwards, 1½ per cent.; under £4, 1s. per share.

FERDINAND R. KIRK, STOCK BROKER,
5, BIRCHIN LANE, E.C.

Consols, Foreign Bonds, Railways, and every security quoted on 'Change bought and sold. Fortnightly accounts opened.
Bankers: London and Westminster, and City Bank.

SPECIAL BUSINESS in the following:—
Bagnall John.
Bilson and Crump.
Birdseye.
Cardiff and Swansea.
Cedar Creek.
Central Swedish.
Chapel House.
Chillington Iron.
Clee Hill.
Dorington Iron.
Denton Colliery.
Devon Consols.
Ebbw Vale.
Fairbairn Engineering.
Flagstaff.
Glaisdale Quarry.
Frontino.
Gt. Western Colliery.
Gold Run.
Hopkins Gilkes.
Javall.
Nant-y-Glo.
Newport Abercrom.
Original Hartlepool.
Pennerley.
Palmer's Shipbuilding.
Pella Coal.
New Silstone.
Sheepbridge.
Silkstone Fall.
Silkstone Dodworth.
Sweetland.
Thorpe's Gawber.
Tylwyd.
Welsh Freehold.
Whitehaven Iron.

MR. WILLIAM WARD
(Late WARD and LITTLEWOOD).

CROSBY HOUSE, 95, BISHOPSGATE STREET WITHIN, E.C.,
DEALS IN ALL KINDS OF STOCKS AND SHARES, for cash or on the account.

MR. HENRY MANSELL, STOCK AND SHARE DEALER,
14, GREAT WINCHESTER STREET, LONDON, E.C.

MR. THOMAS THOMPSON, JUN., 1, PALMERSTON BUILDINGS, BISHOPSGATE STREET, LONDON, E.C.

Some valuable hints as to the purchase of mining shares will be found in Mr. Thompson's "Investment Circular" for December now ready, post free, price 6d.

MR. W. TREGELLAS, 122, BISHOPSGATE STREET WITHIN, E.C.,

Deals in all descriptions of Stocks and Shares at close market prices.

MESSRS. SMITH AND CO., 126, BISHOPSGATE STREET WITHIN, LONDON, E.C.

Messrs. SMITH and CO. Transact Business in every species of Stocks and Shares. SPECIAL BUSINESS in Chapel House, Blaen Cwmnach, Alltarni, and Clee Hill Collieries; Malpas, Malabar, Sweetland, and Birdseye Creek; Great Lacey, Tylwyd, and Grogwinion and Melindur Valley Shares.
Messrs. SMITH and CO.'s "Investment Circular" may be had on application.

MESSRS. ENDEAN AND CO., STOCK AND SHARE DEALERS, 35, GRACECHURCH STREET, LONDON, E.C.

Government and every negotiable Stocks dealt in for cash or account. Order and telegrams punctually attended to.
We advise immediate application and purchase of the BAMPFYLDE and LEANWAT shares. A rise in price is inevitable.

MESSRS. W. DUNN AND CO., STOCK AND SHARE DEALERS, 3 AND 4, GREAT WINCHESTER STREET BUILDINGS, LONDON, E.C.

Orders received and commissions executed.
Bankers: National Provincial Bank of England.

MR. GEORGE BUDGE, STOCK AND SHARE DEALER,
No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C.

MR. WM. MARLBOROUGH, STOCK AND SHARE DEALER,
29, BISHOPSGATE STREET WITHIN, LONDON, E.C.

(Established 18 years.)

G. E. SIMPSON, STOCK AND SHARE DEALER,
6, GREAT WINCHESTER STREET BUILDINGS, LONDON, E.C., will

SELL the FOLLOWING SHARES, free of commission:—
50 Bog, 7s. 6d.
100 Bampfylde, £2 3s. 9d.
75 Chontales, 10s. 6d.
25 Cakemoor.
40 Cedar Creek, £1 13s. 9d.
50 Devon Consols, £2 6s.
5 Dolcoath, £4½.
10 East Lovell, 4s.
45 Ladywell, £2 16s.
25 Pennerley, £1 8s. 9d.
75 Prince of Wales, 10s.
40 Penstruthal, 14s.
20 Roman Gravels, £12½.
15 Richmond, £6½.
25 So. Carn Brea, £1 6s. 3d.
100 Tecoma, 18s. 9d.
25 Tankerville, £8½.
3 Tinicroft, £28½.
50 Van Consols, £2½.
20 West Maria, 7s.
25 Wheel Peevor, £6½.

* Cedar Creek, South Condurrow, and Wheel Peevor shares in good demand.

P. WATSON, STOCK AND SHARE DEALER,
79, OLD BROAD STREET, LONDON.

Bankers: The Alliance Bank (Limited); and Union Bank of London.

MR. T. E. W. THOMAS, SWORN SHARE BROKER,
3, GREAT WINCHESTER STREET BUILDINGS, E.C.
Established 1857.

The following are the latest prices at which business could be done. Holders of mining shares desiring a market quotation for their stock can have their application answered in this list if received not later than Four P.M. on Fridays:—

Buyers.	Sellers.	Buyers.	Sellers.
Bampfylde.....£2 8 9	£2 11 3	Rosewall Hill.....	6s. 7s.
Birdseye Creek.....	6s. 8s.	St. Ives Consols.....	£1 1 2
Bog.....	6s. 8s.	South Carn Brea.....	1 1½
Carn Brea.....	6s. 8s.	South Condurrow.....	4¼
Chontales.....	10s. 11s.	So. Roman Gravels.....	14s. 15s.
Cook's Kitchen.....	8½	Sweetland Creek.....	2½
Devon Great Consols.....	2 2½	Tankerville.....	8 8½
Dolcoath.....	4s. 4s.	Tecoma.....	16s. 3d. 18s. 9d.
East Pool.....	12 13	Tinicroft.....	27 29
Eberhardt.....	4½	Van Consols.....	2½
Flagstaff.....	1¾	West Basset.....	7 7½
Ladywell.....	1¾	West Chiverton.....	1¾
Marke Valley.....	1¾	West Maria.....	7s. 8s.
Parys Mountain.....	8s. 10s.	West Tolgus.....	72½
Pennerley.....	1¾	Wheel Jane.....	4½
Prince of Wales.....	9s. 11s.	Wh. Kitty (St. Agnes).....	4½
Providence.....	4½	Wheel Peevor.....	5½
Richmond.....	£8 9 11 13	Wheel Uny.....	3 3½
Roman Gravels.....	12½		

MR. E. CHARTERS, 36, NORTHUMBERLAND STREET, CHANCERY CROSS, LONDON, can do BUSINESS in the FOLLOWING SHARES, free of commission:—

20 Almada, 14s. 6d.	50 Grogwinion, £2½.	20 Roman Gravels, £12½
10 Bampfylde, £2.	50 Lovell, 17s. 6d.	20 Rossa Grande, 1s.
70 Bog, 8s. 6d.	20 Marke Valley, £1½.	40 Sierra Buttes, £2½.
20 Birdseye Creek, £2½.	50 Mid-Mounta, 49.	50 South Aurora, 9s. 6d.
3 Carn Brea, £52.	10 Minera, £23.	25 So. Roman Gra., 13s. 6d.
40 Cedar Creek, £1½.	80 Malabar, 11s.	8 Thornhill Reef, 12s.
5 Cardiff & Swan., £4½.	40 Malpas, 18s. 9d.	30 Tecoma, £1½.
50 Cathedral, 17s. 6d.	80 Medlyn Moor, £3.	20 Van Consols, £2½.
4 Dolcoath, £47.	30 New Quebrada, £3½.	50 West Basset, £2½.
40 Emma, 16s. 6d.	20 Old Talargoch, £2½.	50 West Chiverton, £2.
10 East Lovell, 49½.	25 New Sharlston, £8½.	70 West Maria, 7s.
30 East Grenville, 7s. 6d.	50 Old Treburgett, 12s. 6d.	10 West Basset, £7.
10 East Basset, £4½.	50 Plymington, 3s. 6d.	10 Wheel Kitty, £4½.
50 Flagstaff, £1¾.	60 Pennerley, £1¾.	25 W. Tankerville, 11s. 6d.
5 Great Lacey, £10½.	50 Pedn-a-drea, 47½.	10 Wheel Crebor, 16s. 9d.
20 Glasgow Caradon, £1¼.	10 Providence, £5.	6 W. Greenville, £5.
40 Green Hurth, £6½.	20 Roca, 7s.	50 Wheel Peevor, £5.
50 Gawn, 18s.	20 Russia Copper, £2½.	10 Wheel Uny, £5.

JOHN MOSS AND CO., STOCK AND SHARE DEALERS,
224 AND 225, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C., transact Business for cash or account on all descriptions of Stocks and Shares.

J. M. and Co. can recommend for investment shares that during the early part of 1875 are likely to double their present price.

Fortnightly accounts opened on advantageous terms.

J. M. and Co. have BUSINESS in the undermentioned SHARES, at quoted prices, free of commission:—

40 Bampfylde.	10 Javall, 6s.	30 Sweetland, £2 17s. 6d.
30 Birdseye.	20 Last Chance, 21s. 9d.	50 Thornhill Reef, 9s. 6d.
50 Bog.	20 Marke Valley, 30s.	100 Tecoma, 11s.
5 Carn Brea.	25 Newfoundland.	20 Tankerville, 8½.
40 Chicago.	50 New Rosario.	20 Untd. Bituminous, 10s.
70 Chontales, 10s.	40 New Quebrada, £3 5s.	10 Van, £21.
70 Cedar Creek, 22s. 6d.	100 North Prince Patr. 20s.	25 Van Consols.
5 Cook's Kitchen.	75 Parys Mountain, 6s. 6d.	40 W. Tankerville, 12s. 6d.
10 Devon Cons., £1¼ pm	5 Pennerley, 39s.	5 West Basset, £7½.
65 Don Pedro, 11s. 3d.	100 Penstruthal, 11s. 9d.	5 West Basset, £8½.
15 East Lovell, 410½.	50 Prince Patrick.	20 W. Esqair Lie, 42s. 6d.
25 Eberhardt, £5 1s. 3d.	50 Prince of Wales, 9s.	25 Wheel Grenville, £5.
30 Emma, 23s. 9d.	30 Roman Gravels, £12½.	10 Wheel Kitty.
45 Flagstaff, 36s. 9d.	25 Richmond, 6½.	20 West Chiverton.
60 Frontino, 8s.	100 South Aurora, 10s.	10 Wheel Peevor.
100 Gold Run, 10s.	20 So. Condurow, £4½.	50 Whitty Gas, 17s.
50 Hington, 22s.	25 So. Prince Patrick, 45s.	60 So. Rom. Grav., 14s.

MESSRS. HARVEY, JORDAN, AND CO.,

MINING AGENTS, ACCOUNTANTS, AUDITORS,

MANAGERS OF PUBLIC COMPANIES, &c.

OFFICES,—80, MOORGATE STREET, LONDON, E.C.

LONDON OFFICES OF THE LEANWAT TIE PLATE WORKS.

MESSRS. HARVEY, JORDAN, AND CO. undertake personally the INSPECTION OF MINERAL PROPERTIES, the MANAGEMENT OF COMPANIES

entirely, or partially by keeping the accounts at their offices, or by periodical visits to the properties; AUDITING OF ACCOUNTS, ARBITRATIONS, &c.

MESSRS. HARVEY, JORDAN, AND CO.

HAVE OPENED, at their Offices, a REGISTER OF MINERAL and OTHER PROPERTIES, both ENGLISH and FOREIGN. Particulars inserted therein for vendors, and the same, with plans and reports, kept for reference to, by investors.

HARLAND AND CO., STOCK AND SHARE DEALERS,

235 AND 236, GRESHAM HOUSE, LONDON, E.C.

Transact business in Kingston Valley, Chapel House, Alltarni, Cardiff and Swansea, Welsh Freehold, United Bituminous, and Clee Hill Collieries—Tankerville, West Tankerville, Lovell, Denbighshire, Tylwyd, Roman Gravels, Birdseye Creek, Sweetland Creek, and every description of Stocks and Shares.

Circulars and Daily Price-List gratis.
Bankers: London and County Bank.

MR. JAMES HUME, STOCK AND SHARE BROKER,

1, ST. SWITHIN'S LANE, LOMBARD STREET, LONDON, E.C.

From 10 to 20 per cent. is obtainable from Government Bonds—quite safe—severally strongly recommended.

The "Investment Record," now ready, post free on application, contains a select list of rising investments.

SPECIAL BUSINESS in Richmond shares, for cash or account.

Business in all stocks and shares transacted by post or telegram, for cash or account.

MR. JAMES STOCKER, 2, CROWN COURT, THREADNEEDLE STREET.

Railway, Bank, Foreign Bonds, and all other Stocks and Shares for Investment or Speculation.

SPECIAL BUSINESS in the following:—

60 Almada.	30 Grogwinion, £2½.	15 Roman Gravels, £12½
50 Bampfylde, 43s.	50 Gawn, 18s. 9d.	75 Richmond, £6 16s. 3d.
50 Birdseye, 51s.	150 Great Lacey, 54s.	100 Roca, 7s. 3d.
30 Bilson & Crump, £10½	15 Hudson's Bay.	500 Rossa Grande, 1s. 3d.
35 Bog.	35 Hington, 23s. 9d.	40 Silkstone Fall, 28s.
50 Blue Tent.	200 Javall, 4s. 3d.	30 Sweetland, 55s.
60 Cedar Creek, 29s. 6d.	40 Last Chance, 18s. 9d.	80 South Aurora, 11s. 6d.
60 Chontales.	100 London and California.	55 So. Carn Brea, 27s.
40 Clee Hill Col., 8s. 3d.	50 Lovell Tin, 15s.	30 So. Rom. Gravels.
70 Chapel House, £3 18s.	40 Ladywell, 54s.	50 Van Consols, £2½.
25 Cardiff and Swansea.	50 Malpas, 18s. 9d.	30 Thorpe's Gawber, £16½
	55 Malabar, 11s. 6d.	80 Tecoma, 18s. 9d.
	100 Marke Valley, 31s. 3d.	10 Tylwyd, 20s.
	45 New Sharlston, £9½.	15 Tankerville, £8½.
	25 New Consols, 40s.	10 Tinicroft, £28½.
	50 Old Treburgett, 10s. 6	100 Untd. Bituminous, 10s. 6
	60 Ditto Preference, 11s. 6	60 United Mexican.
	55 Penstruthal, 14s.	40 Van Consols, £2s. 6d.
	60 Pennerley, 39s.	45 Welsh Freehold, £2½.
	70 Prince of Wales, 10s. 6	55 W. Esqair Lie, 40s.
	40 Prince Patrick.	40 West Gorland, 22s. 9d.
	40 Parys Mountain, 10s.	30 Wheel Peevor, £6½.
	100 Port Phillip, 15s. 6d.	15 Wheel Kitty, £5.
	30 Rookhope, 15s. 9d.	30 Wheel Uny, £3½.

Bankers: London and Westminster.

MR. CHARLES THOMAS,
MINING AGENT, STOCK AND SHARE DEALER,
3, GREAT ST. HELEN'S, LONDON, E.C.

Investments and Speculations, 1874.—Post free upon application.

MESSRS. A. W. THOMAS AND CO.,
10, COLEMAN STREET, E.C.,
MINING AGENTS, AND STOCK AND SHARE DEALERS.

PRINCE PATRICK, AND SOUTH PRINCE PATRICK.—Information of these mines, which are comparatively unknown to the public, may be obtained upon application. Shares bought and sold at market prices.

MESSRS. PENNINGTON AND CO., 3, ROYAL EXCHANGE BUILDINGS, E.C., STOCK AND SHARE DEALERS, have BUSINESS in the undermentioned:—

Birdseye.	Tecoma.	Sweetland Creek
Emma.	West Wheel Gorland.	Malpas.
Flagstaff.	Gold Run.	Buller.
Kitty (St. Agnes).	Pacific.	Rica.
Cedar Creek.	Malabar.	West Esqair Lie.

Parties wishing to purchase or sell in the foregoing are requested to make early application. PENNINGTON AND CO., SWORN BROKERS.

TO INVESTORS.

MESSRS. PENNINGTON AND CO.'S "MONTHLY RECORD

OF INVESTMENTS," published on the first Thursday in each month, contains an exhaustive Review of the British and Foreign Stock and Money Markets, &c., with an enumeration of safe investments, paying from 10 to 20 per cent. Price 6d. per copy, or 6s. annually.

PENNINGTON AND CO., 3, Royal Exchange-buildings, E.C.

MESSRS. W. J. TALLENTIRE AND CO.,

STOCK AND SHARE BROKERS.

20, CHANGE ALLEY, CORNHILL, LONDON, E.C., transact business in

Stock Exchange Securities and Mining Shares of every description.

A Selected List of Safe Investments forwarded to intending investors post free upon application. Fourteen years' experience.

MESSRS. A. ENDEAN, FISHER, AND CO., STOCK AND SHARE DEALERS, 32, NEW BROAD STREET, E.C.

Bankers: London and Westminster, Lothbury.

MESSRS. J. TAYLOR AND CO., 86, LONDON WALL, E.C.

and MINING EXCHANGE, SOUTH KING STREET, MANCHESTER,

MINING ENGINEERS AND INSPECTORS.

Business done in all descriptions of Stocks and Shares.

FOR SALE, 80 Aberdunant shares, at 12s. 6d. per share.

IMPORTANT.

TO MINE AGENTS AND MINING ENGINEERS.

MESSRS. BERKELEY AND CO. have INVENTED A NEW

DESCRIPTION OF STENCIL PLATE for LETTERING PLANS, which

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Points, Trees, Borders, Scales, &c., upon Drawings, equal to the finest hand-work.

These plates not only supersede all others ever introduced, but are supplied at less than one-third the cost. Illustrated Sheets of New Designs forwarded gratis on application to—

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WELLINGTON HOUSE, BRENTFORD ROAD, CHISWICK, LONDON.

MR. TIMOTHY HUGHES,

59, SEEL STREET, LIVERPOOL.

The Registered Office of the PRINCE PATRICK, GROSVENOR, WEST

BRYN CELYN, and GREAT EAST FOXDALE LEAD MINING COMPANIES

(LIMITED).

Full information respecting these Mines forwarded on application.

RELIABLE INFORMATION given respecting Mines in the Isle of Man, Flintshire, and the neighbouring districts.

NICHOLAS M. MAXWELL, LONDON, ENGLAND, Ex-Superintendent

Flagstaff Mine, Utah.

WM. C. HENDRIE, San Francisco, California.

MAXWELL, HENDRIE, AND CO.,

MINING AND MECHANICAL ENGINEERS,

3, QUEEN'S BUILDINGS, QUEEN VICTORIA STREET, LONDON, E.C.;

AND

SAN FRANCISCO, CALIFORNIA, U.S.A.

BRANCH OFFICES:

SALT LAKE CITY, UTAH. DENVER, COLORADO.

Are prepared to inspect, survey, and value Mines, undertake their management,

THE NASCENT COPPER PROCESS.

The PROPRIETORS of this PATENT METHOD of TREATING LOW-CLASS SILVER and COPPER ORES are PREPARED to GRANT LICENSES for its USE at LOW ROYALTIES.
There is hardly a Mixed Metal mine in the world but may be made to pay dividends under this system.
All communications respecting the above should be addressed to—
MESSRS. EMMENS BROTHERS AND CO., 8, OLD JEWRY, LONDON, E.C.

PRUSSIAN MINING AND IRONWORKS COMPANY (PREUSSISCHE BERGWERKS UND HUTTEN-ACTIEN-GESELLSCHAFT.)

BALANCE-SHEET UP TO JUNE 30TH, 1874.

ACTIVA.	
VULKAN IRONWORKS.	
1.—Immobile property, 1872-73. This. 657,011 9 9	
Increase, 1873-74	126,982 23 0=783,994 2 9
2.—Engines, machinery, tools and furniture, 1872-73	188,021 6 10
Written off	6,900 4 10
	181,121 2 0
Increase, 1873-74	7,612 2 8=188,733 4 8
3.—Stock of iron, coals, ores, materials, and cash account, 1872-73	620,995 3 3
Increase, 1873-74	25,591 15 11=592,403 17 4=1,565,130 24 9
Decrease, 1873-74	163,956 15 0
Increase, 1873-74	38 4 0=163,994 19 0
2.—Engines, machinery, tools, and furniture, 1872-73	10,148 28 5
Increase, 1873-74	147 15 0=10,001 13 5
3.—Stock of sundry materials and cash account, 1872-73	1,850 9 7
Increase, 1873-74	1,831 21 7=3,682 1 2=177,678 3 7
More ult., 1873-74	1,831 21 7=3,682 1 2=177,678 3 7

DEUTONIA IRONWORKS AND IRON MINES.

1.—Immobile property, 1872-73	163,956 15 0
Increase, 1873-74	38 4 0=163,994 19 0
2.—Engines, machinery, tools, and furniture, 1872-73	10,148 28 5
Increase, 1873-74	147 15 0=10,001 13 5
3.—Stock of sundry materials and cash account, 1872-73	1,850 9 7
Increase, 1873-74	1,831 21 7=3,682 1 2=177,678 3 7
More ult., 1873-74	1,831 21 7=3,682 1 2=177,678 3 7

ERIN COLLIERY.

1.—Immobile property, 1872-73	728,808 21 9
Increase, 1873-74	168 6 7
Portion (10-57) of Alter Flusberg, 1872-73	45,448 5 0
Increase, 1873-74, 10,007 20 0=55,455 25 0=784,492 23 4	
2.—Engines, machinery, plant, tools, and furniture, 1872-73	11,488 29 6
Increase, 1873-74	14,302 20 0=25,791 16 6
3.—Stock of coals, materials, and cash account, 1872-73	69,389 1 0
Increase, 1873-74	23,883 4 9=93,272 5 9=903,496 15 7
More ult., 1873-74	23,883 4 9=93,272 5 9=903,496 15 7

HANSA COLLIERY.

1.—Immobile property, 1872-73	982,093 2 6
Increase, 1873-74	119,547 28 2=1,101,641 0 8
2.—Engines, machinery, plant, tools, and furniture, 1872-73	355,940 17 10
Written off, 1872-73	14,995 4 2
	240,945 13 8
Increase, 1873-74	56,723 9 11=397,668 23 7
3.—Stock of coals, materials, and cash account, 1872-73	30,905 0 9
Increase, 1873-74	12,253 29 10=18,651 0 11=1,517,960 25 2
Decrease, 1873-74	12,253 29 10=18,651 0 11=1,517,960 25 2

RAILWAY WAGONS.

1.—Immobile property, 1872-73	1,066,855 14 11
Increase, 1873-74	195,516 6 9=1,262,371 21 8
2.—Engines, machinery, plant, tools, and furniture, 1872-73	341,010 14 6
Written off, 1873-74	14,886 20 8
	327,023 17 10
Increase, 1873-74	49,561 17 0=376,585 4 10
3.—Stock of coals, materials, and cash account, 1872-73	45,543 11 11
Increase, 1873-74	17,859 0 9=63,402 12 8=1,703,389 9 2
More ult., 1873-74	17,859 0 9=63,402 12 8=1,703,389 9 2

ZOLLER COLLIERY.

1.—Immobile property, 1872-73	758,080 23 1
Increase, 1873-74	251,296 26 10=1,009,376 24 11
2.—Engines, machinery, plant, tools, and furniture, 1872-73	139,212 10 5
Increase, 1873-74	25,487 6 8=164,699 26 1
3.—Stock of coals, materials, and cash account, 1872-73	17,953 18 11
Increase, 1873-74	9,828 0 5=8,125 18 6=1,182,303 9 6
Decrease, 1873-74	9,828 0 5=8,125 18 6=1,182,303 9 6

HEAD OFFICE.

1.—Furniture, 1872-73	2,305 13 11
Written off, 1872-73	236 16 5=2,069 17 6
Increase, 1873-74	940 13 10=3,009 11 4
2.—Cash account	9,193 22 8
3.—Bills receivable	358 14 2
4.—Securities (shares)	7,000 0 0
5.—Sundry debtors	266,590 8 0
Total	7,407,914 10 3

PASSIVA.

1.—Share capital—Total amount issued, Series I. to V.	2,400,000 0 0
Series VI. to VIII.	1,200,000 0 0=3,600,000 0 0
2.—Priority obligations—Total amount of the first issue	1,200,000 0 0
Of which already drawn for amortisation	51,600 0 0=1,148,400 0 0
Total amount of second issue	2,000,000 0 0
Not yet placed	1,540,000 0 0=450,000 0 0
Borrowed on security of obligations	600,000 0 0=2,207,000 0 0
3.—Bank credits	843,094 11 6
4.—Arrears of working expenses (not yet paid on June 30)—a.—Arrears of freights	6,446 14 0
b.—wages	60,041 4 7
c.—fantièmes	5,557 0 9=72,044 19 4
5.—Interest on obligations	47,720 0 0
6.—Dividend not yet paid	444 0 0
7.—Amortisation account—Obligations not yet paid, out of 1872-73	3,000 0 0
Interest paid on same	85 0 0=2,915 0 0
Obligations drawn for amortisation pro 1873-74	13,800 0 0=16,715 0 0
8.—Bills accepted—a.—On trading account	72,620 11 4
b.—On account of purchased property	107,500 0 0=180,120 11 4
9.—Special reserve fund, 1872-73	131,407 10 0
Deduct for loss in course upon new obligations, placed up to 30th June, 1874	14,010 0 0
Amortisation of 60 obligations, first issue	13,800 0 0=27,810 0 0
Transfer from profit and loss account	103,597 10 0
10.—General reserve fund, 1872-73	360,000 0 0
Transfer from profit and loss account	199,129 26 7
Deduct amount to be written off pro 1873-74 from the mobile and immobile properties	67,354 18 5=93,515 15 0
11.—Sundry creditors—a.—On trading account	157,416 21 8
b.—On account of purchased property	22,000 0 0=179,416 24 8
12.—Mortgage account (Bridoner Eisenberg)	99,880 0 0
13.—Conto pro nuovo—Amounts to be written off pro 1873-74 from the mobile and immobile properties	67,354 18 5
Total	7,407,914 10 3

PROFIT AND LOSS ACCOUNT, UP TO 30TH JUNE, 1874.

To interest on obligations	77,714 6 2
Bad and doubtful debts	7,840 9 3
Working account—Vulkan Ironworks—	
a.—Loss on trading account	262,662 0 2
b.—Written off on iron ores	34,330 14 8=279,492 14 10
Working account—Iron Mines—	
a.—Loss on trading account	36,452 12 8
b.—Written off on iron ores	22,699 26 0=59,122 8 8
Working account—Hansa Collery—	
a.—Loss on trading account	88,809 19 0
Total	530,978 27 11
By balance brought forward from 1872-73	8,055 10 0
Working account—Erin Collery—net profit	216,280 20 7
—Alter Flusberg Iron Mine—net profit	3,915 20 9
Balance—Loss	302,727 6 7
Brought over to—	
a.—Special reserve fund	103,597 10 0
b.—General reserve fund	199,129 26 7=302,727 6 7
Total	530,978 27 11

Audited and found correct and corresponding with the books.
THE COMMISSIONER OF AUDIT—H. C. CRUICKSHANK, GUST. ARNDT.
Düsseldorf, December, 1874.

PRUSSIAN MINING AND IRONWORKS COMPANY (PREUSSISCHE BERGWERKS UND HUTTEN-ACTIEN-GESELLSCHAFT.)

At the general meeting of the shareholders of our company, held in Düsseldorf, on the 12th December inst., the following resolution was passed unanimously:—
The general meeting resolves, upon the recommendation of the Council of Supervision, to increase the share capital by the creation of 15,000 new shares of 600 reichsmarks each (£30 sterling), 9,000,000 reichsmarks, or 3,000,000 thalers (£450,000 sterling), of which the half, or 7500 shares, on nominal amount of 4,500,000 reichsmarks (£225,000 sterling) shall be now issued, and in accordance with Par. 5 of the Statutes be offered to the shareholders at par, upon their declaration to be given within a period of four weeks.

The shareholders are, therefore, requested to take notice—
1.—The holders of the present shares, Nos. 1 to 18,000, have the right of preference to the new issue of 7500 shares—in this way, that every 12 of the present shares entitles the holder to take five shares; for less numbers than 12 every three of the present shares entitle to one new share.
2.—This right of preference must be exercised within the period fixed by the Statutes, at latest up to the 15th of January, 1875 (otherwise it becomes lapsed), by application at any of the undermentioned places, and presentation at the same time of the old shares (or forwarding same by post prepaid), for the purpose of being stamped, and accompanied by a list in duplicate of the shares in the order of their numbers, viz.:—
In London, Dublin, and Cork. At the National Bank.
Berlin At the Offices of the Berliner Handels-Gesellschaft.
Düsseldorf At our Offices, 13, Stein Strasse.

3.—The first call of 10 per cent. is to be paid upon making the application—i.e., at latest on 15th January, 1875.
The second call of 20 per cent. on 15th February.
The third call of 20 per cent. on 15th March.
The fourth call of 20 per cent. on 15th April.
The fifth call of 20 per cent. on 15th May.
The sixth call of 10 per cent. on 15th June.

But full payment will be received on any of the above.
4.—The new shares participate equally with the old shares, pro rata temporis, in the profits of the business year 1874-75.
5.—The returning of the shares after being stamped shall be effected, where not otherwise specially directed, by the party sending them in by post prepaid, under declaration of the nominal value of the shares, at expense and risk of the owner.

THE DIRECTOR—THS. J. MULVANY.
Düsseldorf, the 14th day of December, 1874.

PRUSSIAN MINING AND IRONWORKS COMPANY (PREUSSISCHE BERGWERKS UND HUTTEN-ACTIEN-GESELLSCHAFT.)

REDEMPTION OF THE PRIORITY OBLIGATIONS.
In accordance with the plan of amortisation of the Loans of £180,000 First Emission, and £200,000 Second Emission (Five per Cent. Priority Obligations) of this company, the following seventy-three numbers of the former Partial Obligations, and hundred numbers of the latter Partial Obligations, which are to be paid off at par in the year 1875, were drawn by lot in the general meeting of the shareholders, held at Düsseldorf, on the 12th December inst., in presence of a notary public and witnesses—viz., the numbers

SEVENTY-THREE PARTIAL OBLIGATIONS—FIRST EMISSION.

52	417	971	1972	2829	3904	4542	5229
65	474	1007	2008	3117	3975	4597	5299
130	552	1051	2039	3188	4003	4677	5316
237	580	1335	2241	3279	4066	4678	5392
274	616	1372	2363	3388	4206	4690	5406
294	657	1720	2437	3398	4251	4841	5693
304	705	1821	2463	3406	4358	4916	5724
346	802	1859	2503	3731	4402	5066	5784
360	915	1889	2517	3874	4521	5096	5813
							5875

HUNDRED PARTIAL OBLIGATIONS—SECOND EMISSION.

50	3055	4071	4800	6416	7829	8793	9571
2544	3088	4171	5004	6503	8005	8975	9596
2594	3274	4255	5117	6718	8093	9008	9637
2822	3289	4288	5118	6719	8127	9015	9645
3002	3323	4336	5270	6905	8133	9016	9704
3006	3343	4342	5323	7130	8373	9105	9765
3008	3530	4347	5454	7144	8375	9101	9805
3023	3608	4552	5488	7247	8415	9204	9853
3025	3718	4599	5696	7255	8489	9301	9954
3028	3727	4647	5699	7274	8501	9366	
3054	3755	4677	5766	7533	8602	9399	
3040	3804	4730	5807	7692	8757	9511	
3049	3894	4745	5917	7746	8790	9545	

The paying off of the above Partial Obligations will take place on and after the 1st of July, 1875, upon delivery of the respective Partial Obligations, and the remaining interest coupons, at the company's offices at Düsseldorf.
After the expiration of that time all liability to the payment of further interest upon the above-mentioned obligations ceases.
THE DIRECTOR—THS. J. MULVANY.
Düsseldorf, the 14th day of December, 1874.

RAILWAY CARRIAGE COMPANY (LIMITED). ESTABLISHED 1847.

OLDBURY WORKS, NEAR BIRMINGHAM.
MANUFACTURERS OF RAILWAY CARRIAGES AND WAGONS, and EVERY DESCRIPTION OF IRONWORK.
Passenger carriages and wagons built, either for cash or for payment, over a period of years.
RAILWAY WAGONS FOR HIRE.
CHIEF OFFICES, OLDBURY WORKS, NEAR BIRMINGHAM.
LONDON OFFICES, 7, GREAT WINCHESTER STREET BUILDINGS.

THE BIRMINGHAM WAGON COMPANY (LIMITED)
MANUFACTURE RAILWAY WAGONS OF EVERY DESCRIPTION, for HIRE and SALE, by immediate or deferred payments. They have also wagons for hire capable of carrying 6, 8, and 10 tons, part of which are constructed specially for shipping purposes. Wagons in working order maintained by contract.
EDMUND FOWLER, Sec.
WAGON WORKS, SMETHEWICK, BIRMINGHAM.
. Loans received on Debenture; particulars on application.

ECONOMIC LIFE ASSURANCE SOCIETY. 6, NEW BRIDGE STREET, BLACKFRIARS, E.C.

ESTABLISHED 51 YEARS.
DIRECTORS.
The Right Hon. E. PLEYDELL BOUVERIE, DEPUTY-CHAIRMAN.
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EDWARD CHARRINGTON, Esq.
Hon. CHAS. D. R. HANBURY TRACY, Esq.
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ACTUARY—RICHARD CHARLES FISHER, Esq.
WHOLLY MUTUAL—PREMIUMS VERY LOW—SECURITY COMPLETE.
Invested assets £2,364,647
Annual income 357,000
Claims paid, with bonus additions 4,594,852
Total bonuses declared to 1868 inclusive 2,858,418
Total expenditure 6 per cent. on total income for last five years.
Bonus, 1874.—Cash prize declared £ 383,088
Next division of profits, 1879.

. In order to participate at the next division of profits, policies must be effected not later than 31st of December, 1874.
Forms of Proposal and any further information may be obtained on application to—
JOHN RALPH GRIMES, Secretary.

INVESTMENTS IN MINES ARRANGED FOR CAPITALISTS.
Now ready, price 3s., by post 3s. 3d., Fifth Edition; Fifteenth Thousand Copies, much improved, and enlarged to nearly 300 pages.

HOPSON'S CONVERSATIONS ON MINES, between Father and Son. The additions to the work are near 80 pages of useful information, principally questions and answers, with a view to assist applicants intending to pass an examination as mine managers, together with tables, rules of measure ment, and other information on the moving and propelling power of ventilation, a subject which has caused no small controversy.
The following few testimonials, out of hundreds in Mr. Hopson's possession speak to the value of the work:—
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To be had on application at the MINING JOURNAL Office, 26, Fleet-street, London

THE ROCK-BORING CONTRACT COMPANY.

DARLINGTON'S PATENT ROCK-BORING MACHINERY.
OFFICES,—2, COLEMAN STREET BUILDINGS, MOORGATE STREET, LONDON.

FOR TUNNELLING, DRIVING LEVELS, CROSS-CUTS, AND SINKING SHAFTS.

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WORKS: TEAMS, GATESHEAD;
LONDON OFFICES: CHANDOS CHAMBERS, ADELPHI, W.C.
MANUFACTURERS OF ALL DESCRIPTIONS OF
MALLEABLE IRON CASTINGS, delivered in London, carriage free.

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This company is now fully registered, and in full operation, doing at present a remunerative business, and capable of great extension.
25 per cent. dividend may be fairly anticipated.

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SOLICITORS.
Messrs. SUTTON and ELLIOTT, 17, Brown-street, Manchester.
AUDITORS.
Messrs. NICHOLSON and MILNE, King-street, Manchester.

Prospectuses and Forms of Application, with Testimonials, may be had, and shares taken up, by applying to the Bankers, Solicitors, Auditors, or to the Secretary, Mr. PHILIP GRANT, at the registered office of the company, 60, Market-street, Manchester.
A limited number of shares only remain to be taken up for the present.
Responsible agents wanted in all large towns.

THE DUBBY SYKE MINING COMPANY

(LIMITED).
Incorporated under the Companies Acts of 1862 and 1867, by which the liability of the shareholders is limited to the amount of their shares.
Capital £10,000, in 10,000 Shares of £1 each, payable as follows:—
2s. 6d. per share on application; 2s. 6d. per share on allotment; and 2s. 6d. in three months; the remainder as required, but at intervals of not less than three months.

DIRECTORS.
J. CAMERON SWAN, Esq., Newcastle-upon-Tyne, Chemical Manufacturer (Chairman of the Green Hurth Lead Mining Company, Limited).
Major MONKS, Durham (Chairman of the Teesdale Mining Company, Limited).
JAMES SNOWBALL, Esq., Gateshead, Coalowner.
JAMES OLIVER, Esq., C.E., Newcastle-upon-Tyne.
Mr. ROBERT WIGHT, Engineer, Killingworth Colliery.
Mr. J. H. ROBINSON, Newcastle-upon-Tyne (Managing Director of the Teesdale Mining Company, Limited; and Secretary to the Green Hurth Lead Mining Company, Limited).

BANKERS.
Messrs. HODGKIN, BARNETT, PEASE, SPENCE, and CO., Newcastle-upon-Tyne.
SOLICITORS.
Messrs. HOYLE, SHIPLEY, and HOYLE, Newcastle-upon-Tyne.
CONSULTING MINING ENGINEER.
Mr. WM. VIPOND, Nether Hurth, near Alston, Cumberland.
MINE AGENT.
Mr. JOSEPH PHILLIPS, Harwood, Teesdale (late Agent at the Crooktown and Champion Mines, Crooktown, South of Scotland).
BROKERS.
Messrs. SPENCE and IRWIN, 67, Grey-street, Newcastle-upon-Tyne.
SECRETARY—MR. THOMAS RIDLEY.
REGISTERED OFFICE OF THE COMPANY.
No. 25, WESTGATE ROAD, NEWCASTLE-UPON-TYNE.

This company is formed for the purpose of acquiring the lease of certain mining ground, situated in Teesdale, in the county of Durham, and working the same. The property is of triangular shape, with sides of about one mile each, one of which adjoins the celebrated Green Hurth Mine, which forms the north boundary, another is bounded by the River Tees, and the third adjoins other mining ground which is not at present worked.

Registration of New Companies.

The following joint-stock companies have been duly registered:—

PATENT STAR FIRE-LIGHTER COMPANY (Limited).—Capital 50,000*l.* in 1*l.* shares. To acquire a patent known as the Star Fire-Lighter. The subscribers to this company (who between them take the whole of the shares) are—F. Holmes, Hill-street, Peckham, 25,000; B. H. Saunders, Ventnor, 7,400; G. F. Montgomery, 73, Coleman-street, 6,250; J. W. Oram, Manor-road, Stamford Hill, 3,125; W. H. Saunders, 9, Mincing-lane, 5; S. Bally, 29, Walbrook, 3,125; and W. A. Mansell, 2, Percy-street, W.C., 100.

ELLIOTT'S METAL COMPANY (Limited).—Capital 250,000*l.* in 100*l.* shares. To acquire the business of Elliott's Patent Sheathing Company (Limited), as well as that of Green's Patent Tube Company (Limited). The subscribers are—J. A. Mennich, Fallowfield, Birmingham, 14; J. S. Reep, Edgbaston, 7; H. W. Elliott, Seely Oak, Birmingham, 2; Alfred Reet, Birmingham, 6; H. R. Cooke, Birmingham, 5; W. P. Rayner, Birmingham, 5; and T. Rayner, Birmingham, 5 shares.

STANDARD FIRE OFFICE (Limited).—Capital 1,000,000*l.* in 10*l.* shares. To carry on the business of a fire and marine insurance company. The subscribers are—W. J. P. Henry, 57, Brunswick-square, Brighton, 100; Ernest Noel, M.P., Lyndhurst, Hayward's Heath, 100; J. Montefiore, Oriental-place, Brighton, 100; G. W. Lascelles, 13, Hanover-square, 100; V. Godolphin Osborn, Pall Mall Club, 100; D. L. Salomons, Broom Hill, Tunbridge, 100; J. Rayner, 41, Threadneedle-street, and J. Draper, 29, Great Winchester-street, 100.

CONSOLIDATED MINERAL LEAD MINING COMPANY (Limited).—Capital 40,000*l.* in 5*l.* shares. To carry on lead mining operations. The subscribers (who take one share each) are—T. W. Hardy, 5, St. James's square; J. Marland, Hallinwood; J. Duncan, Manchester; R. H. Rusden, Manchester; W. H. Kershaw, Hallinwood; J. J. Knowles, Broughton, Manchester; S. Schofield, 2, Victoria-street, Manchester.

JOHN MARLAND DAVIES AND COMPANY (Limited).—Capital 60,000*l.* in 5*l.* shares. To carry on business as coal owners, &c., in the counties of Monmouth and Glamorgan. The subscribers are—Alfred Arrowsmith, Oldham, 10; R. H. Rusden, Newwood-street, Manchester, 15; S. Schofield, Victoria-street, Manchester, 11; J. Schofield, Oldham, 20; H. Jones, Hulme, 10; W. J. Rowlands, Hulme, 10; W. R. Parker, Bowdon, 20.

BOLTON WOODS LAND AND BUILDING COMPANY (Limited).—Capital 40,000*l.* in 5*l.* shares. To acquire land for building purposes at Bolton, near Bradford, Yorkshire. The subscribers are—R. Hardacre, Oldfield, York, 50; J. Pullam, Ticklethorpe, near Leeds, 50; M. Stainly, Bradford, 100; H. Stockdale, Bradford, 100; D. Mulligan, Shepley, York, 50; T. Stake, Bradford, 50; M. H. Lang, Bolton, 100.

PRESTON COAL CONSUMERS' COMPANY (Limited).—Capital 20,000*l.* in 1*l.* shares. For the supply of coal, &c. The subscribers, all of Preston, are—W. H. Wilding, 20; J. Dobson, 20; P. W. Mellor, 36; L. Fish, 50; W. Monk, 5; W. Shaw, 25; E. T. Gardner, 25.

PLANET SILVER MINING COMPANY (Limited).—Capital 20,000*l.* in 5*l.* shares. To acquire mining property in Clear Creek County, Colorado. The subscribers are—P. le Nere Foster, East Hill, Wandsworth, 50; T. Reeks, 14, Camden Hill Gardens, 20; W. W. Smyth, 92, Inverness-terrace, 50; G. Todd, East Hill Lodge, Wandsworth, 1; T. W. Wilson, The Beeches, Wandsworth, 1; E. le Nere Foster, Georgetown, Colorado, 2; J. Teal, East Hill, Wandsworth.

OLDHAM MARKET PLACE CORN, GROCERY, AND PROVISION COMPANY (Limited).—Capital 20,000*l.* in 5*l.* shares.

PRESTON AND FLEETWOOD FISHERY COMPANY (Limited).—Capital 10,000*l.* in 100*l.* shares.

JOSEPH HACKETT AND COMPANY (Limited).—Capital 5000*l.* in 5000*l.* in 1*l.* shares. To acquire coal mines, slate quarries, &c.

MOLINEUX GROUNDS COMPANY (Limited).—Capital 15,000*l.* in 15,000*l.* in 1*l.* shares. To acquire a freehold property at Wolverhampton.

SHEFFIELD AND HALLAMSHIRE BANK, constituted by Deed of Settlement in 1836, is now incorporated as an unlimited company.

BERLIN TOWING COMPANY (Limited).—Capital 405,000*l.* in 15*l.* shares. For the acquisition of a concession granted by the Prussian Government for the right to tow vessels by means of chain or wire cables on certain rivers, canals, &c., having communication with Berlin. The subscribers (who take one share each) are—James Forester, 26, William-street, Regent's Park; A. W. Fier, 20, Notting Hill-square; C. Eley, 36, Guilford-street, South Hackney; W. H. Simpson, Redcliffe Gardens, West Brompton; F. J. Tingle, 68, Talford-road, Camberwell; J. H. Barber, Earlswood Lodge, Redhill; F. G. Whitehead, Fenwick-road, Peckham.

COMMERCIAL GUARANTEE SOCIETY (Limited).—Capital 100,000*l.* in 5*l.* shares. To carry on business as insurers or assurers, either as principals or agents. The subscribers (who take 10 shares each) are—J. H. Bedell, 77½, Bishopsgate-street, Within; W. B. Hughes, 44, Gower-place, N.W.; J. W. V. Thompson, Woodford Villa, Streatham; W. W. Hughes, 44, Gower-place, N.W.; H. Hare, Poplar Walk-road; H. A. B. Renick, Chaney-road, Brixton; G. W. Haughton, Pomfret-road, Brixton; T. G. Button, 18, Seckford-street, Clerkenwell.

HYTHE FERR, AND HYTHE AND SOUTHAMPTON FERRY COMPANY (Limited).—Capital 11,000*l.* in 10*l.* shares. To construct a ferry and tramway at Hythe.

BINN'S PATENT ENDLESS BAND COMPANY. (Limited).—Capital 130,000*l.* in 10*l.* shares. To acquire a patent for improvements in the manufacture of endless bands for machinery, &c.

GROSVENOR TURKISH BATH COMPANY (Limited).—Capital 8000*l.* in 10*l.* shares. To acquire baths, &c., at 119, Buckingham Palace-road.

SKATING RINK COMPANY (Limited).—Capital 5000*l.* in 10*l.* shares. To acquire a patent for the manufacture of an improved skate, and to establish a skating rink at Brighton.

WERNETH SPINNING COMPANY (Limited).—Capital 50,000*l.* in 5*l.* shares. To carry on business as cotton spinners at Oldham.

WIGAN BRICK AND TILE COMPANY (Limited).—Capital 10,000*l.* in 10*l.* shares.

BRISTOL INDUSTRIAL DWELLING COMPANY (Limited).—Capital 20,000*l.* in 50*l.* shares. The object of this company is explained by its title. The subscribers (who take 10 shares each) are—W. B. Addison, Littlefield-place, Clifton; G. Arles, 3, Winchester-street Buildings; F. Fox, Atlas Ironworks, Bristol; F. G. Barnett, Bristol; W. H. Budgett, Stoke House, Bristol; S. Budgett, Bristol; A. Gibbs, Nailsea; and H. R. Price, Linton Villa, Clifton.

ECONOMY OF FUEL IN FURNACES.—M. Foucault, in a report to the Industrial Society of Rheims, combats the idea that the smokelessness of a fire can effect a notable saving in the amount of fuel burnt. He alleges also, on the other hand, that a considerable loss of economy is produced by smoke-consuming apparatus. He brings, in support of his opinion, the long series of observations made by the Industrial Society of Mulhouse, which have proved that, with the ordinary boiler furnaces, it is only necessary to consume from 125 to 150 cubic feet of air for each pound of coal, while furnaces, for the most part, pass twice that quantity. If the draught be reduced in quantity much smoke is evolved, but the products of combustion, circulating more slowly, part with their heat more readily to the boiler flues. It is further proved that the best means of reducing the loss of heat by the chimney is the use of feed heaters in the flue, so as finally to reduce to 20° the products of combustion, which are often discharged as hot as 400°. Feed-water heaters well set, will produce an economy of from 11 to 20 per cent., with a reduced draught. The conclusion is that furnaces with large area and suitable feed-heaters are the most economical in all respects. But in order to obtain the best results much care is needed in stoking. A little at a time and often should the coal be spread over the front of the fire, and the bright coal pushed back to the bridge. At the same time, the least possible quantity of cold air should be admitted.

INSPECTOR OF COAL MINES.—The Civil Service Commissioners intimate that a competitive examination for the situation of Inspector of Coal Mines in the Home Secretary's Department will be held in London, on Tuesday, Jan. 12. The person appointed Inspector will act, at first, as assistant to one of the existing Inspectors. He will receive a salary commencing at 500*l.*, rising 15*l.* a year to 400*l.*. As vacancies occur he will be eligible for promotion to the charge of a district, and will, upon promotion, receive a salary of 600*l.*, rising 20*l.* a year to 800*l.*.

ECONOMY OF FUEL.—Mr. L. E. Fletcher, chief engineer to the Manchester Steam Users' Association, in his report, says—The desire on the part of boiler-owners to economise fuel has for years past led them to work steam more expansively, and to this end to raise the pressure in their boilers, and in many cases to compound their engines. Whereas about 10 years ago the highest pressure for a mill boiler of the internally-fired double furnace, or Lancashire type, was, as a rule, 60 lbs. on the inch, it is now 80 lbs., and in some cases 100 lbs., while in boilers of other constructions it is as much as 150 lbs. The recent coal famine has tended to quicken this movement, both as regards raising the pressure in the boilers and compounding the engines. I have long been desirous of presenting the members with copies of diagrams taken from some of the engines recently altered with a view to economy, coupling these diagrams with the coal account both before and after the alterations, so as to show the economic results obtained, whether by the adoption of the "compound" or "simple" engine principle. This, I thought, could not but be useful. I will begin with a case met with at a cotton-mill, in which there were six internally-fired double furnaces or Lancashire boilers, ranged in two separate series of three each. The boilers in one series had a length of 34 ft., a diameter in the shell of 9 ft. 9 in., and in the furnaces of 3 ft. 6 in.; while the boilers in the other series had a length of 32 ft., a diameter in the shell of 10 ft. 6 in., and in the furnace of 4 ft. The blowing-off pressure of all the boilers was 35 lbs. on the square inch. These six boilers drove four beam condensing engines, those connected to the first series of boilers being independent one of another, and those connected to the second series forming a pair with the cranks set at right angles. On remodelling these boilers all the old ones were removed, and in place of the first series three Lancashire boilers were laid down, with a blowing-off pressure of 80 lbs.; and in the place of the second series four Lancashire boilers were laid down, with a blowing-off pressure of 100 lbs. In each case there was a spare boiler, and the dimensions as nearly as may be were—length, 27 feet; diameter

in the shell, 7 feet; and in the furnace tubes 2 feet 9 inches. On the remodelling of the engines they were all compounded by means of cylinders, which are laid horizontally, or very nearly so. In the case of the single-beam engines an additional crank was added at the fly-wheel end of the shaft, and in the case of the pair of engines the crank pins were lengthened, and the additional cylinders coupled directly thereto. All the high-pressure cylinders had cut-off slides working on the back of the exhaust slides, each having its own independent eccentric, but the expansion apparatus was not regulated by the governor, nor were any of the cylinders steam-jacketed. After remodelling the boilers and engines the consumption of coal per week was 80 tons. Before remodelling it was 180 tons, so that 100 tons of coal week was saved by compounding and raising the pressure to 100 lbs. in one series of boilers, and 80 lbs. in another. The consumption of coal per horse-power per hour was reduced from 8.2 lbs. to 3.9 lbs. These returns are in the gross. The firm estimate that 10 tons should be deducted for the steam drawn off for sizing, and without making any deduction for heating the mill. This would reduce the coal consumption per horse-power to 2.7 lbs. A weekly saving of 100 tons of coal, at a cost of 13s. per ton, which the firm were paying a short time since, amounts to about 3300*l.* per annum.

ST. JOHN DEL REY MINING COMPANY.

The report of the directors, to be presented at the meeting on Wednesday next, is the most encouraging which has been presented for some years. The recommencement of remunerative operations, announced in the last report as having commenced in January, have been continued throughout the half-year now reported upon. The net profit on the working of the mines for the half-year has been 29,033*l.* 18s. 8d., and adding 5563*l.* 11s. 3d., the profit brought forward from last year, there will be, after payment of 1160*l.*, the London expenses for the six months, an available balance of the sum of 33,439*l.* 9s. 11d., out of which the directors recommend a dividend of 25,300*l.* (10 per cent. for the half-year), and the placing of 10 per cent. thereon to the reserve fund, leaving 5619*l.* 9s. 11d. to carry forward. The quantity of mineral raised during the six months ending September was 17,988 tons, the quantity stamped during the same period being 18,218 tons, which yielded on the average nearly 7½ oits., or nine-tenths of an ounce of gold per ton of ore, which is nearly equal to the produce of 1867 before the fire, the average at that date being 8.439 oits., or 0.973 ozs. per ton. The amount of gold recovered in the six months by re-treating the sand was 10,931 oits., or rather more than 1260 ozs. try.

During the half-year the mine has been opened out as rapidly as consistent with the future economical and advantageous working of the formation. The new Quabra Panella pumping-wheel has been completed and put in motion during the half-year. The wheel performs the duty of lifting to the surface the water that flows into the old mines at the shallow levels on the western side, and so prevents its going down to be lifted the greater height by the new shaft pumping machinery. By the erection of this wheel economy has been effected in the water power, as the water that drives it is applicable, both before and after it passes over it, for driving other wheels, whilst the water that drove the Bahu wheel, being no longer required for that purpose, can be applied to the general purposes of the establishment.

Other important and necessary surface works have been completed and taken in hand during the half-year, amongst which may be mentioned the necessary erections for putting up the turbine and air-compressor, for driving the rock-boring machinery which the directors have sent out. The water which drains into the old excavation from the feeders therein, except the western shallow-level feeders above referred to, continues to be drawn off by the bore-holes from the shaft A, and these, being provided with cocks, afford the means of keeping the water completely under control.

The general work of the establishment has been carried on during the half-year with the usual regularity and effect. Mr. J. N. Gordon, the superintendent, having had occasion to be at Rio de Janeiro on important business of the company's for ten weeks of this period, Mr. J. M. Anderson Gordon, the company's engineer, performed the duties of superintendent during his absence with success, having been cordially supported by the heads of departments, the other officers and men, in the execution of these arduous duties.

With regard to the financial position of the company, there is 43,355*l.* 4s. 5d. in hand; another remittance of gold is due in January to pay 45,730*l.*, including the dividend now recommended and the 10 per cent. to the reserve fund. There is also 16,009*l.* 19s. invested. In Brazil they have 12,542*l.* 3s. 6d. cash to pay 9655*l.* 1s. 10d., so that the position is as sound as could be wished; and the meeting, which will be fully reported in next week's Journal, promises to be a very interesting one.

ENGLISH COAL ABROAD.

Our coal exports appear destined to attain, after all, considerable importance this year—that is, considerably increased importance. The reduction which has taken place in prices has immediately had the effect of stimulating the external demand, which amounted in the eleven months ending Nov. 30, this year, to 12,862,246 tons, or at the rate of 13,934,100 tons per annum. This total would compare as follows with the exports of the previous 15 years:—

Year.	Tons.	Year.	Tons.
1859	7,082,029	1867	10,565,829
1860	7,412,675	1868	10,967,062
1861	7,954,532	1869	10,744,945
1862	8,380,673	1870	11,792,649
1863	8,342,500	1871	12,747,989
1864	8,900,872	1872	13,198,494
1865	9,233,214	1873	12,617,566
1866	10,142,260	1874	(estimated) 13,934,100

This year's total thus promises to be the largest on record, and, in spite of every circumstance and every drawback, the tendency of the exports appears to be irresistibly onwards. Comparing 1874 with 1864, the advance achieved in the ten years will be, as nearly as can be estimated, 5,033,228 tons. Should our coal exports move on at the same rate of increase for the next 30 years they will attain an aggregate in 1904 of 29,033,784 tons, and it is needless to say that such an annual drain upon our coal resources would tend very materially to bring about their early exhaustion. However, the great sums paid annually for the coal shipped to our colonies and foreign countries constitute, of course, a well nigh irresistible attraction. These sums were as follows for the last 16 years (the total for 1874 is, of course, approximate, being estimated upon the basis of the actual value for the eleven months ending Nov. 30):—

Year.	Value.	Year.	Value.
1859	£3,315,379	1867	£ 5,488,945
1860	3,371,631	1868	5,437,922
1861	3,652,184	1869	5,165,668
1862	3,796,727	1870	5,638,371
1863	3,752,308	1871	6,245,133
1864	4,230,883	1872	10,442,321
1865	4,496,567	1873	13,188,511
1866	5,218,498	1874	(estimated) 12,090,067

Thus, notwithstanding the very substantial progress which the exports have made this year, their aggregate value will be sensibly smaller. But as we said at the outset so we now repeat, that it is the sensible reduction in prices which has given a fillip to the exports of coal from the United Kingdom this year.

Our largest customers for coal continue to be France and Germany. Years ago, and not so many years either, French writers affected indignation at the fact that France imported 1,000,000 tons of coal annually from Great Britain, but this year our coal shipments to the French will not be very far short of 2,400,000 tons. They were still increasing in November, having amounted in that month to 219,005 tons, as compared with 206,925 tons in November, 1873, and 180,781 tons in November, 1872; at the same time the aggregate exports for the first 11 months of last year were scarcely up to the mark of the shipments in the corresponding period of 1873. The exports to Germany have moved on at a rapid rate this year, having amounted in the first 11 months of 1874 to 1,942,801 tons, while in the corresponding period of 1873 they did not exceed 1,551,151 tons, albeit that in the corresponding period of 1872 they reached a total of 2,000,609 tons. Our coal exports have largely increased this year to Russia and Italy; they have also expanded to Sweden and Norway, Denmark, Turkey, Egypt, Brazil, Malta, and British India; but they have decreased to Holland and Spain. As regards British India, the working of coal in New South Wales, Borneo, and India itself does not appear to have at all reduced the demand for English coal upon the Indian markets. Delivered at Bombay, English coal cost, a few months ago, 8*l.* per ton. It may

have since become a little cheaper, but it is still enormously expensive; nevertheless, we sent British India 606,994 tons of coal in the first 11 months of this year, while in the corresponding period of 1873 we only exported 484,831 tons in the same direction, and in the corresponding period of 1872, 518,766 tons. However, the Indian railway companies are doing all in their power to reduce the consumption of English coal upon their lines to the lowest possible point. The Indian railway companies are encouraged in this policy by the efforts of the Indian authorities to turn to better account the forests of India, to create new forests or plantations in India, and to open out the coal resources of India. Nevertheless, our Anglo-Indian friends are still very fond of our black diamonds.

MINERAL RESOURCES OF BOLIVIA.

The absolute necessity for the ready means of transport, in order to render the development of the mineral and general industrial resources of a country profitable, was probably never more clearly shown than in the case of Bolivia, whose rich deposits of minerals, and enormous natural productions, remain comparatively worthless, owing to the absence of any facilities whatever for getting the produce to the coast, or materials to the mines. To enable capitalists thoroughly to comprehend the requirements of Bolivia, and provide for them with advantage to themselves, Mr. Avelino Aramayo prepared a careful history of Bolivian industry and commerce, and he has reprinted extracts from his book in consequence of the increased interest now felt in the country. After visits for many years to Europe and America, connected with industrial and commercial matters, Mr. Aramayo ultimately devoted himself to mining affairs, these being the principal occupations in Bolivia, and at a period when this branch of industry was in general decay. He proposed to advance mining operations by improving the modes of working, and after 12 years of constant application he succeeded in stimulating progress in two of the undertakings with which he was connected, by showing the causes of their backwardness; still, mining in general continues in a depressed state. The careful study he made of the old system, the obstacles he encountered to establish the new, with the daily discoveries of mines, showed to him that the main cause of the want of success was that the mines existed so far in the interior, and in the want of roads and connection with the commercial world. He concluded that to extricate mining from such an unsatisfactory state, it was at least necessary to have a railway from the Pacific Coast to the interior.

It is to mineral industry, in Mr. Aramayo's opinion, that the Bolivians should dedicate themselves, for the reason that it is the best adapted to their territory, naturally so metalliferous, to their inland situation, to their present industrial and economic position, and that it is also in conformity with their historical traditions. He remarks that the mines that in former times have produced immense wealth are at present in the most abject state of depression. In 1846 they had 10,200 mines of silver and gold, of which only 200 were in work, and 10,000 abandoned; and from 1846 to the present time the yield has gradually decreased, so that excepting a very few miners who have been fortunate enough to come upon a vein of metal of extraordinary richness, all the rest are in a miserable position, and the best arranged enterprises soon decay and go to ruin. Mr. Aramayo has undertaken the task of explaining the cause of this, and suggesting means for its removal. They have a large number of mines, and with most extensive veins; of these in olden times only a few have been worked to a certain depth, and are untouched below where ore exists in abundance and of superior quality; the proper working of these would give incalculable wealth. The geological character of the hills and mountains are essentially metallic, and, if we except some few, the formation of recent origin, and caused by partial and isolated cataclysms, all the rest carry with them more or less abundance of gold and silver, or at least of copper, lead, tin, and iron. Not without foundation it is believed that the great chain of the Andes, running through Bolivia in various directions, is in great part metalliferous, and has hidden in its depths virgin deposits of gold and silver, which some day will give the world immense wealth. Taking into account the opinions of the old miners, as well as his own observations, it is obvious that they did not penetrate sufficiently in depth, limiting their explorations to little distance from the surface, and abandoning one rich mine for another the moment they met with the slightest obstacle.

It cannot be denied that the old miners wanted the most common and indispensable knowledge for the exercise of their industry; nor could it have been otherwise, for at the time of the Spanish conquest, and even afterwards, they had the most imperfect information of mechanics and geometry, sciences on the principles of which are founded the operations of mining, or the art of discovering where the metals are to be met with. In working the veins they kept to no rules, nor followed any plan of art, nor practised any preliminary operation which would have prolonged the duration of the mine, or saved expense in extracting the ore or the water. It is to be observed, too, that at no period was there employed larger capital in mining with the object of assuring permanent production. Of the great sums the Spanish Government expended in the construction of the lakes of Potosi, the Mint, and the royal socavon, or adit, there never was set apart any considerable amount for the encouragement of one undertaking with views for the future. The miners on their own account have worked the mines as well as they were able, some being ruined, others obtaining profits, but the general result has been disastrous, as can be well understood, on account of the small capital employed, and by miners so little experienced in the business of risk without a centre of help or combination to sustain them, and for want of union they have gone on disappearing. Mr. Aramayo remarks that there are nearly 2,000,000 of Indians, of whom at most 10,000 are employed in mining, and that there can be obtained as many workmen as may be required whenever the progress of mining is enabled to offer labour better conditions. The Government monopoly of silver bullion has ceased, so that the facilities for profitable mining is increased. By the law of Sept. 11, 1872, the exportation of silver from Bolivia is free. As to the want of security in Bolivia which is supposed to exist, owing to the instability of the Government, Mr. Aramayo explains that the frequency of these political convulsions has limited their action to a certain class of society making politics their business, and who live in its ups and downs; but the working class has always been reserved, and up to a certain point sheltered from their influence, and only indirectly suffering from them. There is still more in this respect, and he can say with satisfaction that Bolivia is one of those countries in the world noted for the greatest respect for property; excepting in one or another isolated case, they have no examples in their revolutions that violent hands have been laid upon personal property.

In former times when the discoveries were made, the veins of silver being found on the surface of the mountains, some in prodigious abundance of metal, others less, but all more or less rich, the facility of working gave occupation to the thousands of Indians, who at little cost gathered great heaps of ore from the vein they chose among many. The richer portions of the ore were worked by smelting in the guairachinas—ancient furnaces; the inferior quality was put aside until grinding mills were established. Lipez, Potosi, and Oruro were great places of mines where machinery could be established in their vicinities, and the only spots where large quantities of ores could be extracted in consequence of the facility there was of carrying it to the ingenios, or grinding mills, &c., situated at short distances from the mines. All the ore at that period were the pacos (chlorides), easily manipulated; thus machinery was only used in pulverising the ore. Amalgamation was performed by repaso—trodden by the feet of innumerable Indian "mitayos"—forced labour. When negrillos and azufrados replaced the pacos, the works which had been erected became useless, and the treatment of ores which merely required roasting, was regarded as hopeless. The only conclusion to be drawn from Mr. Aramayo's volume is that although Bolivia is rich in minerals, they are worthless to her until she has increased facilities of transport. Without roads and railways the Bolivian miner has no market wherein to sell his products, neither can he purchase as wanted the articles required for his works, so he is obliged to collect large quantities of all he requires in anticipation. With improved means of transport Bolivia will be

able to supply not only gold and silver, but copper, tin, and other metals also, and the time is evidently fast approaching when it will form a favourable field for the enterprise of British capitalists.

SULPHUR IN SICILY, AND ITS REDUCTION FROM THE ORE.

By Professor G. VON RATH.

The strata in which the sulphur occurs belong to the tertiary for mation, and, according to Mottura, to the miocene epoch. They extend over a large portion of the island, the greatest length from east to west being about 100 English miles, and the greatest breadth 53 to 56 miles; within this large tract the sulphur formation appears in groups. The oldest rocks of this tract are sandstone, which rest upon gneiss and slate. On these sandstones are marl beds, which resemble keuper marl; then follow limestones, both jurassic and cretaceous, and eocene nummulitic limestone, with a peculiar porous limestone in crags and ridges. On the top of the latter is a foraminiferous marl of marine origin, after which follows a stratum of tripoli, upon which is a stratum of calcareous marl, which is in some places more argillaceous, in others more calcareous; this is the stratum which contains the sulphur. The sulphur formation is generally covered over with immense masses of gypsum, on which again is a foraminiferous marl. Then follows the pliocene formation, blue clay and yellow breccia.

It is probable that the quite extensive deposits of salt, found in widely distant portions of Sicily were formed at the same time as the deposits of sulphur. The rock salt enclosed in the clay strata is often very pure. The deposits of sulphur are not usually of great extent, and do not seem to be in immediate communication. The sulphur impregnates the strata of clay and limestone, appearing either in irregular threads and veins, or in layers 3 ft. to 6 ft. thick, alternating with the layers of rock, or in round concretions from 0.4 to 0.8 of an inch in diameter. Barytes and imperfect crystals of calcspars accompany the sulphur, and more rarely beautiful crystals of celestine. Sometimes the sulphur strata enclose whole stems of fossil wood. The thickness of the sulphur deposit, in its frequently recurring changes, often remains very constant, and indicates an equally regular change in the conditions under which it was deposited; it almost reminds a person of the changing seasons. The fishes found in the sulphur marl enable us to recognise the sulphurous strata as formed by fresh water.

Parodi states that the average percentage of sulphur in the sulphur rock of Sicily is 12.5 per cent. When it contains less than 6 per cent. of sulphur it does not pay for mining and smelting. In 1871 Sicily produced 150,000 tons of sulphur, probably 9-10ths of that produced in the whole world—this production is continually increasing. That this natural wealth does not prove a greater blessing to the country and its prosperity is principally due to the circumstance that in Sicily the property on the surface cannot be released from that of subterranean treasure, and this circumstance results in a number of other evils, which do not permit mining to emerge from its great and almost inconceivable imperfection. The number of sulphur mines in Sicily is upwards of 600, not more than half of which are worked at present; and of these only about 50 are of considerable importance. In looking for the sulphur deposits, a soft kind of gypsum, formed by the decomposition of the sulphur-bearing lime or calcareous marl plays an important part. In general the sulphur is combined with gypsum, and the presence of the latter renders it probable that the former is near. To reach the deposits inclined shafts are dug, having an inclination of 25° to 50°, seldom steeper and more seldom horizontal. Neither horizontal galleries nor vertical shafts are employed, since the former would not reach the sulphur soon enough, and the latter would require the use of some sort of machinery; and the wood is lacking for this purpose, as also for timbering and frame work. Steps are cut into the inclined plane, and when it is not steeper than 45° the steps reach all the way across; but when steeper two steps are cut side by side, alternating with each other. The young labourers climb up and down these high, narrow, and slippery steps, panting, groaning, and sweating—carrying on their heads and backs heavy bags filled with sulphur ore. They make from 16 to 18 ascents and descents daily to and from a depth of over 200 feet. By this pitiable method at least 1,000,000 tons of sulphur ore are annually brought up into the light of day by boys and youths. Nay, too, the little drippings of water are collected in stone jugs, and brought up in the same laborious manner. The mine is almost always abandoned when it reaches the water level. The temperature in these is very high, 111° Fahr., and owing to the moisture in the air, it is almost unendurable. The diggers (*picconieri*), owing to the heat, work naked, or only wearing a small apron. The sulphur rock is so soft that it is cut out with a large instrument like an axe. The roof of the mine is supported by pillars, so that a considerable portion of the ore is left standing to secure the structure. In order to obtain the mass of the pillars, they are weakened more and more, until at an unexpected moment the roof falls. The fallen and broken mass is left for a time until it adheres together; shaft and galleries are then dug through it to get at the pillars. When the sulphur-bearing strata lie one above another there is a double set of pillars. Through errors in the ground plan, and ignorance of mining surveying, it generally happens that the pillars in the upper gallery do not agree with those in the gallery below. As the stone is often soft and brittle, it is no wonder that they frequently break through.

The condition of the sulphur miners is extremely deplorable. The manner of living in populous spots miles distant from each other instead of in villages is peculiar to that country, and the majority of the mines are far distant from human dwellings. Neither manager nor contractor consider it a duty or necessity to erect a roof to protect their workmen, so that they sleep in the open air in pleasant seasons, exposed to the damp dew; while in winter they sleep in the foul atmosphere in the mine itself, exposed to the dangers of being buried alive. In cases of sickness the unfortunates have no assistance, and the families of those who die or are killed are exposed to the greatest misery. As regards education and moral instruction, the working classes are entirely neglected; there are no schools, savings banks, or associations for mutual aid. The consequence is that the society which grows up about the sulphur mines is in every respect an abandoned class, ripe for crime. The mines are a refuge for evil doers from the whole island.

The sulphur is prepared throughout Sicily by melting the stone in calcaroni, where the combustion of a portion of the sulphur furnishes the necessary heat to fuse the remainder. The liquid sulphur drips down to the bottom, and flows out into moulds intended for its reception. In building a calcarone a spot is selected at the side of a hill, and a cylindrical furnace built from 20 to 40 feet in diameter and a few yards in height. The walls are supported in the rear by the earth, and in front project in a semi-circular form. The hearth of the furnace has a double inclination, from the hill towards the front, and from the sides towards the middle, so that the liquid sulphur collects in one place, and through a perforation in the inner wall it reaches the outlet. The bottom is pounded down hard, like a threshing-floor. The interior is filled with sulphur ore, the larger pieces being thrown in just as they are, and the smaller ones are formed into cakes, so that the melted sulphur will flow down through it more readily. When the cylinder has been filled, the pieces of sulphur ore are heaped up in a cone above the masonry, and covered with the burned pieces from a previous operation.

A calcarone will hold from 175 to 1750 tons. In charging the furnace several vertical flues are left open, which serve in part for kindling the fire, and in part to keep up the combustion at the beginning of the operation. The pile is ignited by throwing burning wood or bundles of straw down these openings. When the whole mass gets burning, all the openings are closed; and the operation, which lasts from two to four weeks, according to size, is attentively watched, and the combustion controlled by the cover on the heap. The temperature is kept at a proper height, above 240° Fahr., since sulphur melts at 240°, and remains a thin fluid up to a temperature of 320°. The melted sulphur is drawn off through a hole 1 ft. wide and 2 ft. high in the front of the furnace, which is previously stopped with clay. The sulphur is run into wooden moulds, the bottom and sides of which are moistened so that the sulphur cake will not adhere so tightly. This method of obtaining sulphur is attended with

a great deal of loss; experience shows that the highest yield of a calcarone is 70 per cent., although it does not usually exceed 50 per cent. of the total amount of sulphur. The crude sulphur is worth from \$1.80 to \$2 per 225 lbs., so that the fuel consumed is worth at least twice as much as English coal would cost in Italy.

In producing sulphur in Sicily only those resources to be found on the spot are made use of; no wood for framing, no machinery for raising the ore and water, no coal for smelting. Anyone who would attempt to introduce any improvement in mining or reducing the sulphur would encounter great difficulty, arising chiefly from relations of proprietorship, and in the social status of the country. Legislation is the only help. Notwithstanding the immense store of natural sulphur on the island, it will be seriously impaired by the progress in other countries, which now make oil of vitriol from pyrites, unless some change is effected in the state of affairs.—*Scientific American*.

THE BRENTWOOD BRICK AND COAL COMPANY.

A company is in course of formation, called the BRENTWOOD BRICK AND COAL COMPANY, with a capital of 25,000£, in shares of 2£ each, with power to augment the capital to 50,000£. The company is formed for the purpose of procuring and working a property, the soil of which consists of a deposit of fine plastic clay, well adapted for the manufacture of bricks, tiles, pipes, and some descriptions of potters' ware, because of the superior quality of the material, which is abundant. The site is most advantageous for the transmission of the manufactured goods to the best markets, especially London; and for the purpose of procuring coals, chalk, breeze, and other constituents of the work, the land of a superior quality is at hand.

The area of the property is about 23 acres, 2½ of which are occupied by railway sidings, and other conveniences. These sidings run from the Great Eastern main line right into the works, affording every facility for loading and unloading. The cost of freight to the London market is but 5s. per 1000, and is scarcely a matter of consideration when the high price of bricks here is taken into account, and so vast is the demand, from the progress of building in and around London, that it is impossible to glut the market; indeed, at present it is scarcely possible at all adequately to supply it.

There is one thing of very marked importance in connection with the promotion of this company—that the *bona fides* of the matter are presented on surface. Any practical man may calculate production, expense, and return. There is nothing speculative in it. Credit payments are almost unknown in the trade, which stipulates for cash down. Moreover, accounts are so kept that investors need not wait for half-yearly and yearly balances to ascertain their assets; a daily inspection of the books will supply all that is required to be known. It is also a very important circumstance that this is not what is called "a progressive property," in the sense that the investor must wait for any return for his money until it is developed. The investor enters at once into a dividend-paying property, which is sure to yield from 10 to 20 per cent.

The late Mr. Bass, whose experience as an architect gave him good opportunities for forming a judgment, published his opinion that this property contained clays and other materials for the formation of various descriptions of bricks which were of the best marketable value, especially in London, where the supply is far inferior to the demand. He described these bricks as superior to the best Suffolk, or at all events equal. The tiles produced are in great request in the neighbourhood for agricultural purposes, for which, in draining especially, they are well adapted.

Mr. Bass uses in his report this remarkable sentence—"20,000,000 of bricks and upwards can be produced per annum, at a cost of 20s. per thousand." The cost, therefore, on the whole, is 20,000£, whereas the selling price is 30s., amounting to 30,000£ per annum, which in the gross is a profit of 50 per cent.

Mr. Chapman, the well-known surveyor of Bishopsgate-street, has confirmed the views of Mr. Bass. He describes the estate as one "of great value, in which all the elements exist to make it an extensive and profitable undertaking." It appears to be, from all circumstances, a favourable investment. The detailed prospectus will be published in next week's Journal.

Original Correspondence.

REMARKS ON THE ORIGINAL CORRESPONDENCE IN THE SUPPLEMENT TO LAST WEEK'S "MINING JOURNAL."

SIR,—The letter from "C." on Co-operative Collieries, will repay a careful perusal; its facts are suggestive. This movement merits our sympathy and support, appearing to us a ready and satisfactory way out of strikes, and their concomitant evils; and this view seems to be prevailing among the miners' agents, if we may judge from the address, at Bedworth, from Mr. William Brown.

"Government Inspection of Collieries." The remarks from "H. J. C." are worthy of being universally disseminated; showing, as they do, that Government Inspection has certainly worked gratifying results, although it may be considerably improved.

"Underground Machinery." We think, with "N. B." that there must be considerable advance in the item of reduction of cost before machinery will supersede manual labour in the working of mines.

"Rock-boring Machines" and their merits can scarcely be settled in a newspaper controversy.

"Doubtful Minerals." We are glad to see a clever writer sticking up for old mines. In our view, nothing is more absurd than this pretentious mode of introducing stilted language into one of the most important of the sciences, and its being done with the sanction of Dana, or Maskelyne, does not lessen the absurdity. The only object seems to be to compel the student to be forever purchasing new books. We think "T. J. K." for his timely remarks.

"Mineralogy." Mr. White gives us a chemical-historical commercial and assay Office, 26, Finsbury-place, London, attract customers to his Laboratory.

"Meteorology." Your correspondent, "C. O. B." has entered upon a very abstruse subject, which will some day amply repay greater attention than has hitherto been devoted to it; although, we fear, at present not attracting much general interest.

"What is Electricity?" Mr. Richard Jex Crickmer seems to be not so devoid of knowledge of the subject on which he writes as some of your correspondents would appear to have concluded. We would be glad to see more letters from him on the same subject.

"Welsh Mines." Mr. Absalom Francis and "Galena" both seem friendly to the development of mines in the Principality. We believe that some advantage may yet accrue to capitalists who support well-selected enterprises here, but that care in selection is required we are also satisfied, and trust that those writers will, while pointing out the good, continue to lend their powerful aid in pulling down some worthless schemes, and consigning them to limbo.

"South Condorow." Will the recent change in the management improve the price of shares? That seems to be the question, as it seems too much to ask men to act justly and fairly, if by so doing the "almighty dollar" is jeopardised. At what level does the Great Tin lode go out of South Condorow sett? It appears that the bottom of the engine-shaft is thought by some to be already below that point.

"West Chiverton." It seems already discovered that 12 months' "dead work" is required here. Could not the gentlemen who professed they were going to take the helm in order to make it profitable have seen this before? If 12 months' why not 12 years' dead work? Will not much of the lead now open be sent to market in 12 months?

"Mining in Queensland." Although "Resident's" present letters do not seem to agree with his former contributions, whereby we were led to conclude that the production of tin was rapidly falling off, yet we are glad to see a letter from him on this subject. No doubt he has more light, and is able to give us more reliable information from a more thorough acquaintance with the tin producing districts. One notion of his seems strange; he says, "Owing to their grasping policy the English smelters have lost the trade." Does "Resident" think that any policy of the English smelter could have kept up the price of tin in the face of the then apparently ever increasing production of that metal at the Queensland fields? We are glad that the frightful panic is ended, and the increase checked, for to that alone is due the present steadiness of prices.

We cannot avoid noticing the excellent Lectures on Chemistry delivered at the Royal School by Dr. Frankland, of which you have given us valuable extracts. It is this careful catering for the intellectual food and scientific instruction of your readers which renders the *Mining Journal* indispensable to many who cannot very conveniently avail themselves of this information through any other channel.

READERS OF THE MINING JOURNAL.

[For remainder of Original Correspondence see this day's Supplement.]

MINERS' DIALS.—Mr. J. L. CASARELLI, of Market-street, Manchester, instrument maker, has patented some improvements in miners' dials or circumferencers. The features of novelty consist in applying the graduated scale in the form a semicircle or arc limb across the face of the compass box of the dial on swivel joints, in such a manner that it can be turned down when not in use, and when raised to a vertical position for use it does not obstruct the view through the sights.

TREATING ORES.—Mr. N. W. WHEELER, of New York, has patented some improvements in the art or process of reducing iron and other ores, the production of steel, and in apparatus for the practice of the same. The provisional specification describes a process for treating ores for the production of neutral iron, carbonated iron, carbon and chrome steels, and an apparatus for its practice. Granulated ore is showered down through a column of flame and carbon gases confined in a vertical shaft, so that the ore is pre-heated to incandescence while falling through flame, and reduced while falling through carbon gases. Carbon steel is produced by showering the ore through the column of flame and carbon gas into a bath of fused carbonated iron. Chrome steel is made by showering the ores of iron and chrome proportionately mixed through the double column mentioned into a bath of molten metal. The apparatus consists of a vertical shaft rising from a reverberatory furnace provided with a receiving hearth under the shaft, and a balling hearth under the arch of the furnace, with a door at each hearth and a gas and air inlet at one end. Holes are formed in the sides of the shaft at about half its height to admit air for combustion of the gas column. Near the top of the shaft are hoses, through which the ore enters in a shower from a series of hoppers,

and a rotating radially chambered drum forming the ore-feeding apparatus; a separate but like apparatus feeds the flux at a different point.

COMPRESSING AIR.—Mr. C. J. BALL, of New Bridge-street, has patented some improvements in apparatus for compressing air or other elastic fluids. This invention relates to apparatus used for compressing air or other elastic fluids, and consists, first, of an arrangement of steam-engine driving a crank pin upon a heavy fly-wheel, upon which crank pin also works a connecting rod, which drives a piston in a pump arranged at an angle to the steam-engine. This pump is single-acting, having one end open, and is fixed in a cistern of water which has access to the inside and outside of the pump. The pump piston is adjustable so as to work close down to a cover, to which are fitted inlet and outlet valves. The inlet valve is connected to a tube, into which water in the form of spray is driven by a jet of air. By the arrangement described little or no strength is required with the shaft of the fly-wheel. Second, of a method of compressing air by injecting it into a receiver by a current of steam or other fluid. Third, of a method of condensing air by means of a tube arranged helically and caused to revolve in water by means of a water-wheel or other power. One end of the tube is open, and dips into the water as it revolves, taking up a certain quantity which travels along the tube as the latter revolves, forcing with it the air in the tube, whence they pass into a receiver from the end of the tube, which is brought into a line with the axis of the apparatus.

Meetings of Public Companies.

CWM DWFYR COPPER AND SILVER LEAD MINES COMPANY.

The general meeting of shareholders was held yesterday (Friday) at the offices of the company, St. Clement's House, City.

The chair was occupied by Mr. THOMAS HARVEY, in the absence, through indisposition, of Mr. J. Hopgood, Chairman of the company.

Mr. G. J. GRAY (secretary) read the notice calling the meeting.

The following report of the directors was read to the meeting:—The directors, in presenting their report to the shareholders, desire to express their great regret that, in consequence of unforeseen delay attending the completion of the Gorsedda Junction and Portmadoc Railways, they have not yet been able to commence the sale of ore and realise returns as they had expected. The line, however, is now nearly completed from Portmadoc to within a mile of the mines, and it will, the directors hope, be laid for its whole length by the end of the year. Considerable further progress has been made in opening out the mine since the date of the last report, with very satisfactory results. The details of the work done since September, 1873 (as will be seen by the agent's report), are as follows:—

North and South Cross-Cuts: The north and south cross-cuts which were being driven have been completed as far as at present intended—viz., the north 20 fms. 2 ft. from the main shaft, and the south 17 fms., and by the extension the north and south lodges have been intersected, making, with those previously cut, eight lodges (two lead and six copper), all within a distance of about 74 yards, and all yielding lead and copper ore in paying quantities. No. 1 level, driving east of the north cross-cut, has been driven 6 fms. 6 in. on the course of No. 4 level, Old Lead lode, which is found to be about 5½ ft. wide; 5 fms. 5 ft. more has been driven to get under the shaft sunk from surface, where the lode is 7 ft. wide, yielding rich ore. No. 1 level, driving east of the south cross-cut, has been driven 11 fms. 1 ft. on the course of No. 4 south or Great Lead lode; the present end of this level is about 8½ fms. from the shaft sunk from surface, where the lode yields from 2 to 3 tons of silver-lead per fathom. No. 2 level, driving east of the south cross-cut, has been driven 8 fms. on the course of No. 3 lode; the lode carries rich lead ore on the north wall, and on the south side good copper ore.

Stopes: Some little work has been done in the stope, east of the shaft, on the south lead lode above referred to; about 6 fms. beyond this point the lode will yield from 2 to 3 tons of lead and about 1 ton of copper ore per fathom. The directors are very anxious that the communication between No. 1 level, driving east of the south cross-cut, and this shaft should be speedily effected, as valuable stoping ground will thereby be laid open. The lodges driven on as above described have yielded copper and lead ores throughout, which has been added to the stock previously on hand. The crushing machinery is ready to be delivered, and can, so soon as the railway is sufficiently completed to be available for transit, be set up, when the ore on hand will be dressed and sent to market. For the purpose of providing the requisite funds, it will be necessary to issue the 4555 unallotted shares, and as the cheap and easy means of transit provided by the railway will in a few weeks be available, the directors have every confidence in inviting subscriptions for these shares from the present shareholders, so that, the success of the mine being now, as the directors believe, assured, they may reap the whole benefit of the undertaking.

Several of the shareholders have personally inspected the property, and it is the intention of the directors to invite all the shareholders to visit the mine in the spring; meantime the directors trust they may be furnished, by the remaining shares above referred to being taken up, with the means necessary for vigorously working the property and securing continuous returns of ore. The retiring directors are Messrs. Stewart and Yates, the former of whom offers himself for re-election. The auditor, Mr. Edward Brooks, also retires, but offers himself for re-election.

The CHAIRMAN said that the directors, in their report, expressed their great regret that, in consequence of unforeseen delay attending the completion of the Gorsedda Junction and Portmadoc Railways (which was a most important matter), they had not yet been able to commence the sale of ore, and realise returns, as they had expected. He was happy to say, however, that the line of railway was now nearly completed, that the men were now working on the last mile of it, and in a very short time the communication with the mine would be completed, when the ore could be sent direct to the ships' side at Portmadoc without any interruption whatever. The want of transit had been the main cause in preventing the development of the mine up to the present time, as it had been impossible to haul up heavy machinery without incurring immense difficulty and expense, but as soon as the line is completed the heavy machinery for crushing could be taken up and attached to the present water-wheel, and operations could be commenced at once. There were large quantities of ore waiting to be crushed, and the stock might have been made much larger, but it was useless putting out ore until they had means of crushing it. In Capt. Jewell's report they had an account of the work done during the past year. The shareholders would see on the wall a plan of the mine and the working of the lodges, and he ventured to say that those acquainted with mining and with mineral ground would come to the conclusion that a more extraordinary piece of mineral ground had never been seen, and this was the report which the directors got from all persons who had visited the property. A short time since he met the Government Surveyor of the district, who had been visiting the mine, and who, referring to the richness and quantity of the ore, said he had never seen anything like it in Carnarvonshire. All the reports which the directors had received respecting the property spoke with the utmost confidence of what could be done by a proper development of the mine. By the aid of the plan the CHAIRMAN pointed out the exact progress which has been made on all the different lodges. Full particulars of work done will be found in the report of Capt. Jewell. He (the CHAIRMAN) went on to say that the ventilation of the mine could be easily and cheaply effected, and the mine did not require any timber, and there was no machinery except that belonging to the water-power, which cost nothing except the erection. From a rough calculation which he had made, he estimated, putting everything at the lowest possible point, that there were 4000 fathoms of ground, which would yield 1 ton per fathom, which, at 15s. per ton, would give 60,000£. For that portion of the property alone. The expenses he had put down at 24,000£, which would leave him 36,000£. As a Cornishman, and having had experience of mining for 40 or 50 years, he could only state that he had never seen such an aggregation of lodges and such a quantity of mineral as there seemed to be in that comparatively small space. He said it had been the intention of the directors to hold the meeting at the mine, in order that the shareholders might see for themselves the excellence of the property they possessed; but as the railway was not yet completed, it would have been a matter of very great difficulty to get to the mine. The directors were most desirous that the shareholders should have the very fullest information, because there was nothing so common, and only good could arise from the real facts being made known; therefore, as soon as the spring arrived, a meeting would be held at the mine. After again congratulating the shareholders on the excellent prospects before them, he moved the adoption of the report and accounts.

Mr. STEWART seconded the resolution, which was put to the meeting, and carried unanimously.

The CHAIRMAN stated that two of the directors retired by rotation—namely, Mr. Stewart and Mr. Yates—but only the former gentleman offered himself for re-election. He, therefore, moved that Mr. Stewart, who was a most efficient and valuable director, be re-elected a member of the board.

Mr. KIRTON seconded the resolution, which was put and carried unanimously. The CHAIRMAN next moved that Mr. Charles Barton be elected a director of the company, and said that Mr. Barton was a thorough man of business, and came upon the board with the determination to do everything in his power to bring the company to a successful issue.—Mr. STEWART seconded the resolution, and bore testimony to the excellent business qualifications of Mr. Barton.

The resolution was put to the meeting and carried unanimously.

On the motion of the CHAIRMAN, seconded by Mr. STEWART, the Rev. Logan Logan was elected a director in the place of Mr. Yates, retired.

Mr. BARTON said that in March last he visited the mine in company with the Rev. Mr. Logan, and from the enquiries which he then made he satisfied himself that the company possessed a most eligible and excellent property if they only had the funds to work it. He thanked the shareholders for the confidence they had shown in him in appointing him a director, and he would do all in his power to promote the welfare of the company.

The CHAIRMAN, in answer to a question, said that the railway was now being pushed on with the utmost vigour; about 100 men were employed upon it, and a very few weeks more would see its completion.

The auditor, Mr. E. Brooks, was then re-elected, on the motion of the CHAIRMAN seconded by Mr. BARTON.

The CHAIRMAN said there was one other very important matter to which he had to refer. There were 4555 unallotted shares, and as the railway was just on the point of being completed, some additional funds were necessary to push on the vigorous working of the mine, to provide a small working capital, and to pay for the machinery, and one or two other small matters. He believed the shares were now fully worth 5s. per share. The directors thought that the time had arrived when these unallotted shares should be issued, and the directors were desirous that they should be taken up by the present shareholders, instead of allowing so valuable an investment to be taken by the outside public. He might mention that the directors alone held 3576 shares, and they were willing to take their proportion of the unallotted shares, provided the other shareholders did the same. Many large shareholders had expressed their willingness to take their proportion, and he had no doubt that nearly all the shareholders would do the same. The money could now be made use of to very great advantage, and it was for the shareholders to say whether or not it was advisable to issue the unallotted shares.

A short discussion took place, in the course of which several shareholders expressed their great satisfaction with the statement of the CHAIRMAN, and their confidence in the future of the mine, and it seemed to be the general opinion that it would be most desirable, and most beneficial to the interests of the company, that the unallotted shares should be issued.

Eventually, on the motion of Mr. KIRTON, seconded by Mr. STEWART, the following resolution was unanimously passed:—"It being absolutely necessary that

the whole of the remaining capital unissued should be subscribed to carry on the undertaking, the shareholders are hereby invited to increase their holding."

In the course of the discussion, it was mentioned that the directors had not taken any fees, and do not intend to take any until the mine is making returns.

On the motion of Mr. BARTON, seconded by Mr. MAPPIN, a cordial vote of thanks was passed to the Chairman for his able conduct and lucid statement respecting the property, and the meeting broke up.

RICHARDS AND COMPANY.

The statutory meeting of shareholders was held at the London Tavern, Bishopsgate, on Thursday, when a report of the present state of the undertaking was made by Mr. Power, one of the directors.

Mr. STRIDE (the secretary) having read the notice convening the meeting, the formal report was taken as read.

Mr. ANDREW WALLS (the Chairman) explained that the present meeting was merely held to comply with the Act of Parliament. He was glad to say that the statement which would be laid before them by Mr. Power, one of the managing directors, was of a highly satisfactory character.

Mr. POWER then addressed the meeting. He said that, as the Chairman had stated, they had been called together in accordance with the Act of Parliament, which directed that a meeting must be held within four months after the formation of the company. It was a matter of considerable pleasure to the directors, and especially to himself personally, to meet the shareholders face to face, as they felt it much better that they should not be strangers to each other, after having been brought into a connection which, he trusted, might last for many years. It would always be a matter of mutual satisfaction when they met to receive their dividends, as he believed they would, with great regularity. He had now great pleasure in laying before them a statement respecting the formation of the company and its workings up to the present time. The first thing he would refer to specifically was the acquisition of the property. He would first remark that, as he himself was one of the vendors, they might probably think that he was partial in his estimate; but he would, nevertheless, say to them that they had acquired the property within its value. It had not been the intention of his firm, or of himself, to have disposed of it, and it was a matter of very great regret to them to do so; but there were certain partnership relationships which rendered it desirable, and also the advisability of procuring further capital. Their business was composed of two departments. First, there were the collieries, and then there was their business as coal merchants and coal factors. At the colliery they were acting under the best engineering advice which it was possible to procure; obtained, too, at a time when they had no notion in their minds that they were to form the concern into a company, or to let go out of their own hands. They were aware that in the colliery shafts, or windings as they were technically called, it was important that they should have them in a position whence the coal could be most readily obtained. Now, he would say most emphatically that this was the case with the Llanharan Colliery. They did not wish to claim for themselves any exceptional merit for the way in which that property had been developed; but he did say this, that the property of the shareholders, as he would now call it, as well as the property of the firm—which still held a considerable pecuniary stake in it—he would say that this property was being opened out in a very substantial manner for them. The two businesses required an expenditure of capital, and, as time went on, they would be able to tell them that the business had increased in a substantial ratio since the transfer to the shareholders. (Hear, hear.) He was glad to say that for the two months up to Nov. 30 during which the company had been formed there had been an increase of 8 per cent. in the sales, and that in spite of the great depression there had been in the coal trade. It was impossible to say more, or to go into particulars defining the exact quantities of coal sold. He thought that they, as commercial men, would see that it was a wise thing on their part not to make these things public. In their private capacities they would be happy to afford any information to any shareholder who would call at the office; but in such a trade as theirs, and on the present occasion, he did not propose to go into minute particulars, or to say who were their customers. The firm was still identified with this business, as it had been before, both by disposition and by having a large interest in it. They would always act, as they believed, to the mutual satisfaction of themselves and the other shareholders. As they had made this business successful for themselves, so they hoped to make it successful for the shareholders, so that they would never have any cause to regret investing their money in this colliery. (Hear, hear.) He might say that, with this object in view, their general expenditure had not been large, and that they had not incurred any extra expense. All their old working staff continued to be employed, both at the head office and in the various departments. They had got competent men of business managing their departments, all of whom had a direct interest in the results of the business done at their respective branches. For the reasons he had stated he did not particularly name their customers, but they had got on their books the first and largest coal consumers in England and abroad. As an indication of the class of men with whom they dealt, he might say that out of a turnover of at least half-a-million in two years they had not made a single bad debt. (Hear, hear.) This was at least a proof of the high character of their business, though he did not intend to go into the details of any of their working arrangements, he would repeat the invitation he had already given to any shareholder to come to the office and see for himself. He would, however, give them some extracts from the latest reports from their collieries. No. 1 was now fitted up with carriages complete, and was capable of an output of from 200 to 300 tons per day. The headings were being driven on, and were opening out to obtain the above quantity. The policy on which they had worked when their attention was first drawn to the colliery was now being continued. There had been no output, but had merely done what was required to make the colliery keep up its output, and for the rest they would wait their time. At No. 2 pit they had well completed the erection of one engine, so that it might now be proceeded with. The building of cottages for the workmen was a matter which had the earnest attention of the managing directors and their colleagues. He had, indeed, an appointment for Monday next to meet a landlord of property in the neighbourhood of the collieries, for the purpose of marking out ground on which it was intended to erect substantial working men's cottages. They would take care in the selection of ground in such a position as not only to be conveniently situated with respect to the colliery, but suitable in other respects, and would lose no time in the erection of the cottages. They not only had the men's interests in view, but also that of their wives and children, in selecting such a site so that the children could get easily to an excellent school in the neighbourhood, and the wives have facilities for getting the necessary supplies of food. They proposed this day to declare a dividend at the rate of 10 per cent. per annum. They felt that this would be as much as it was prudent at present to pay, having in view the fact of the selection of the colliery and the desirability of having a good surplus capital with which to extend the business, wherever extension might be found requisite. He thought that this dividend of 10 per cent. would meet their views, and trusted they would approve of it. They would be placing themselves in a good financial position by declaring such a dividend, and would be paving the way for the payment of a higher dividend, as he assured them that they looked for something considerably higher. They had been contemplating arrangements for paying the dividends quarterly instead of half-yearly, if they could work the plan with their own staff and without incurring any extra expense. He had the pleasure of announcing that, since the formation of the company in October they had concluded a profitable arrangement for the sale of the Ynysodwyn Company's coal for a term of years. This company had one of the largest anthracite coal properties in the country, being something like 3000 or 4000 acres in extent. They had several large collieries at work, with facilities for an extended business, and the shareholders of this company (Richards and Co.) would be able to command a good market for the produce of these collieries. This was an agency which would bring a large and safe income without any risk whatever. In this arrangement they took no risk as to bad debts, but, as they had none themselves, he hoped they would not lead other people in them. There might be many of their friends amongst the shareholders who were able to influence orders for the company. If there were such shareholders, he would venture to suggest to them that they should not neglect to do this. By so doing they would be serving both their own interest and that of their fellow-shareholders in extending the business of the company, and thereby increasing its dividends. (Hear, hear.)

Mr. POWER, in answer to one of the shareholders, added that they were paid by commission for the Ynysodwyn agency—there was absolutely no risk about it. The report, with the recommendation as to dividend, was then agreed to unanimously. Mr. Arthur Cooper, public accountant, and Mr. Fryer, one of the shareholders, were appointed auditors. The business before the meeting being concluded, the CHAIRMAN, in reply to a shareholder, stated that they were now prepared to issue the unallotted shares.

Mr. PHILLIPPS said he did not think they ought to part without proposing a vote of thanks to the Chairman and directors for the thoroughly practical statement which Mr. Power had made. He had very great pleasure in proposing such a vote.

Mr. FOWLER begged to second the vote, and wished to take the opportunity of saying that one of the most pleasing features of the whole report was that connected with the erection of the workmen's houses. (Hear, hear.) He thought that this step promised better for the working of the company than anything that had been laid before them. The wish that he would express as an individual was that no false economy would be used in preparing those buildings, and in making them suitable and healthful for the workmen. There was nothing would put so much good feeling in an undertaking as having this provision made for the benefit of those who really earned its profits. (Applause.)

The CHAIRMAN suitably acknowledged the vote (which had been unanimously passed), and with this the meeting ended. The dividend will be payable on Jan. 15.

[For remainder of Meetings see to-day's Supplement.]

ST. IVES, LELANT, AND TOWEDNACK MINING DISTRICT.

A serious gloom has come upon the mining interests of this neighbourhood.

At WHEEL MARGARET the adit has broken down, caused by the great overflow of water (the winter or rainy season having set in with a vengeance), driving it back into Wheel Kitty and Wheel Mary; in the latter it has raised more than 50 fms., and will not probably be got out again before the spring. This, following upon an overflow about a week or more ago, is very unfortunate. It is said the pumping engine is a most miserable machine, and cannot be driven the required speed. The pitwork is also represented to be of a flimsy nature, and constant breakages are occurring when attempts are made to do so.

At GEW (or South Providence) similar difficulties have to be encountered. The engine, a 50, is a very perfect one, and they say cannot be driven more than six or seven strokes per minute, so that the prospects of draining the mines this winter, and with a continuance of the late floods, are almost hopeless.

At ST. IVES CONSOLS the financial position is feared to be so bad that shares have fallen to 1½, 2, and no buyers.

At PROVISION MINE the lode has been cut on the other side of the cross-course at Hawke's very poor, and this being the only part of these once famous mines of any value, the prospects are far from cheering, and unless operations are curtailed to meet existing circumstances, which is far from compatible with good mining, a heavy call is inevitable at the next meeting, in January. Much annoyance is also expressed at the manner in which the interests of the adventurers is made to serve political purposes.

At ROSEWALL HILL they have also a great overflow of water in the shallower part, but this as yet has caused no great inconvenience. Any increase or overflow in the old mine will fall back into St. Ives Consols, a thorough communication having been effected, this last-named mine being nearly 100 fms. deeper.

TRENCHM is an isolated mine, and has very powerful machinery. It would be desirable for Wheel Mary to effect an early communication therewith (the companies being the same), or there will be no safeguard against overflows, which, according to the laws of Nature, are sure to happen sooner or later.

It will thus be seen that apparently a cheerless winter lies before us, the more so when it is feared no advance in the price of the produce can be expected for some months, but more likely the contrary. Let us trust, however, that the great Providence who takes and gives will shield and protect us.

Lectures at the Royal School of Mines.

FIRST PRINCIPLES OF CHEMISTRY.

The sixth and concluding lecture on "The First Principles of Chemistry," was delivered by Dr. FRANKLAND on Monday, Dec. 7. The subject was WATER. Water, said the lecturer, is of all the materials which surround us, perhaps, the most important, and to night we must study it more in detail. The properties of water, which nearly everyone thinks he understands, are, however, very extensive, and a whole course of lectures would not be sufficient to exhaust the subject. First, as to the colour of water. You probably imagine this colourless, and so it is when viewed only in a thin stratum, but when viewed through a layer of proper thickness it has its own peculiar tint, a greenish blue. This we can show by sending a beam of white light through a tube of water 15 ft. long; the light which falls on the screen after passing through the water has this greenish blue colour. This thickness corresponds to a reservoir 7½ ft. deep, and on looking into a reservoir of pure water of that depth at least we should see this colour is due to the water. In our country, unfortunately, owing to the pollution of the water which exists everywhere, we have few opportunities of seeing this proper colour of water; but it may be seen to perfection in the Italian and Swiss lakes, and forms one of the chief charms of the landscapes in those countries. One is at first disposed to think that there must be something dissolved in these waters which imparts that deep blue tint; the fact is that it is in the absence of something dissolved, and it is this something dissolved in our waters which masks their proper colour. A second property of water to be borne in mind is its incompressibility: for a long time it was supposed incompressible, but it has been proved to be compressible to the extent of 51.3 volumes in 1,000,000 volumes for the additional pressure of one atmosphere. Its practical incompressibility renders it a most useful medium for the transmission of pressure, as in the hydraulic press. A third property of water is the following: while nearly all bodies contract on cooling, and expand on heating, water on cooling to the freezing point contracts as it cools down to 39° F., and then begins to expand, and goes on expanding to the freezing point; its maximum density, which cannot be surpassed, is at 39° F. This fact has an important bearing on the freezing of ponds and lakes: the water at the surface cools and sinks down, warmer water rising from below, to be cooled in its turn; this goes on till the whole of the water has sunk to 39° F.; then the surface water cooled lower than that, being lighter, floats on the surface, and as water is a very bad conductor of heat the cooling of the under portions takes place very slowly. Meanwhile the water at the surface freezes, and we get a coat of ice on the surface, for since it is lighter than water it floats on the water, and this ice, being also a bad conductor of heat, acts as a kind of blanket, protecting the water below it; and this lower water may retain the temperature of 39° F. for a very long time. This is of very great importance to the living organisms in the water, which would find it difficult to live if the water were cooled down to the freezing point, and certainly could not live if the water were frozen. The next point is the high specific heat of water: it has the highest specific heat of any substance we know—or, in other words, at a given temperature it contains more heat than an equal weight of any other substance. This has an important bearing on the climate of islands and countries bordering on the sea. In the summer the sun's rays are absorbed by the land, which becomes strongly heated, whereas the water, on account of its high specific heat, absorbs the heat, but does not become much warmer; thus it tends to moderate the heat of the land. In the winter the land soon yields up its heat, and becomes cold, whereas the water can give out a large quantity of heat with a very little fall in temperature, and so moderate the cold. Thus the climates of islands and sea-board countries are much less given to extremes than those far removed from the influence of the ocean waters. Water in sinking through a few degrees of temperature is capable of heating a very much larger quantity of air through the same number of degrees: 1 cubic mile of water in losing 1° of heat warms 3076 cubic miles of air through 4°. For this reason our east wind, which passes over a great extent of land, is colder than our west winds, which come to us over water. Water has also a high latent heat—it absorbs a large quantity of heat when being transformed from ice into water, and gives it out again when being transformed from water into ice. Thus 3 cubic feet of water gives out, and must give out, in passing from water at 32° F., or 0° C., into ice a quantity of heat which is equal to that evolved by burning a bushel of coal. With regard to ice, there is one kind of ice called "ground ice," which some of you may have seen, and which is formed at the bottom of rivers, and which people usually consider to be a different kind of ice from that formed at the surface of water. But the explanation is very simple. Last winter I happened to be in Switzerland, and I observed that all the ice formed in the rivers there was "ground ice"—formed at the bottom. It occurs in this way: in a turbulent river, as those Alpine rivers are, the water is continually agitated and mixed up, and thus even below 39° F. we have the whole of the water of the same temperature, and this may go on to the freezing point, and then we have the water on the point of freezing, and it will do so as well at the bottom as at the top. Now, it is known that ice forms most readily in contact with stones or rough surfaces, and hence in these cases the ice will form in preference at the bottom, on the stones in the bed of the river, and when once formed it will go on increasing. This is the simple explanation of the phenomenon of "ground ice," it depends upon the whole of the water being of the same temperature, due to agitation, and the tendency of ice to form most readily on a rough surface. If water be kept perfectly still it is possible to cool it several degrees below the freezing point without its becoming ice; and people have not unfrequently been surprised to find the water in their jugs freeze as they took them up to pour out the water. In every case where a liquid becomes converted into a solid heat is given out, as we may see from this super-saturated solution of Glauber's salts, by means of the thermo-pile.

One of the most useful properties of water to the chemist is its solvent power—the power of dissolving various substances both solids and gases. Thus, one volume of water is capable of absorbing at 15° C., and ordinary pressure 780 volumes of ammonia. This solubility of gases in water is frequently made use of by the manufacturer to remove from his escaping products some gas which would be injurious, or which may be of service to him. And such substances as ammonia gas and hydrochloric acid gas are rendered marketable articles by dissolving them in water, and sending the solutions into the market. With regard to solids, their solubility varies much with the temperature: as a rule, the hotter the water the more of the salt it will dissolve; to this rule, however, common salt (chloride of sodium) forms a remarkable exception, it being equally soluble at all temperatures. If a quantity of water is saturated with salt at a high temperature, as the water cools it usually deposits the excess of salt, and the solid thus deposited assumes definite regular geometrical forms, called crystals. (Some beautiful examples of crystallisation were projected on the screen, the salts being sal ammoniac, red chromate of potash, and red prussiate of potash.)

All the above remarks refer to water in a state of purity; and I may say at once that water is never found so in nature, not even in those lakes I spoke of, the water in which contains salt in solution, and only differs from our dirtier waters in containing less organic matter. We may divide the water we meet with in nature into three classes—(1) drinkable, or potable, water; (2) mineral water,

or that which contains large quantities of salts in solution, and frequently possesses medicinal properties; (3) polluted water, fouled by the drainage of towns or the refuse of manufactories, and so rendered unfit for domestic purposes. The importance of the purity of drinkable or potable water can scarcely be over-stated; for example, it has been ascertained by laborious researches during the last 15 or 20 years that one of the readiest means of conveying the germs of cholera and other epidemic diseases is water contaminated by the excrementitious matter of persons infected. This is so horrible to think of that it is often disbelieved, and yet it is the fact that people in large towns are constantly drinking water that has been contaminated with their own excrementitious matter. And the presence of this matter in water is not so easy to detect as you might imagine. Not unfrequently the water tastes rather better than pure water, and so people, unconscious of the cause, prefer it. There are one or two ways in which you can test the water supplied to you, which I will mention. Here are three specimens of water; one is as pure as we can possibly get in the laboratory; the second is the ordinary Thames water, supplied to this building; the third specimen I have obtained from a notorious pump in Bloomsbury-square. I add to each a little solution of nitrate of silver: with the first there is no precipitate at all, with the second a moderately abundant precipitate is formed, with the third a copious precipitate renders the water as white as milk. If the nitrate of silver gives a very copious precipitate in your water beware of drinking it; it may be fit for use, but it is probably not fit, and may be contaminated with infectious matter. The water from the pump in Bloomsbury-square is obtained from a shallow well, and it is now open to the public, and supplies the neighbourhood with water, and you will find that all the shallow wells of London are as bad as that one. They are, in fact, nothing more than the soakage from cesspools, &c., round about, and are, of course, greatly contaminated; yet the water is bright and cool, and in summer especially people prefer it to the warm rapid water supplied in the pipes. In some districts of London we can get water much purer than the Thames water—viz., in those districts which are supplied with the water obtained from deep wells sunk in the chalk. And this leads me to show you another very simple way of testing a specimen of water to ascertain how it is with regard to suspended matter. Let a beam of sunlight from a hole in a shutter (or as we shall use here a strong beam of light from the electric lamp) pass through a flask full of the water, the nature of the track of the beam in the water will discover its state. Here we have one flask filled with Thames water supplied to this institution, and in this other flask we have the deep well water supplied to some parts of London by the Kent Company. The beam of light in the first of these is seen as a broad band, revealing a very large quantity of suspended matter, invisible to the naked eye; while in the deep well water the beam is scarcely visible, being merely a thin line of light, showing how very free it is from suspended matter. And yet that Thames water has been filtered as completely as it is possible for sand filters to do; but no amount of sand filtering will make the water like that which has soaked through several hundred feet of chalk, as the deep well water has done. (Dr. Frankland then showed on the screen examples of the living animals found in water, some of these samples being taken from a part of the Thames at which the water for London was taken some years ago.)

There is one more quality of water to which I must allude, though I can only do so very briefly, and that is its hardness or softness. Now, the quality termed hardness depends upon the presence of certain salts of lime and magnesia. The difference between hard and soft water is readily seen by attempting to wash in the water; with soft water this is easily done, the hands rubbing over each other quite smoothly; but with hard water the hands, if rubbed together in the water, grate together, and in fact it cannot be done. To wash with hard water you have to make a solution of soap on your hands out of the water, and then dip them into the water to wash this off. But you will find that a greasy, curdy substance is formed, and this is deposited in the pores of the skin, so that washing in hard water is really a process of dyeing, and were it not that this dye is white we would not tolerate it at all. This deep-well water is exceedingly hard, but it can be softened in the following manner:—A quantity of clear lime water is added to it, and the whole shaken together. It will be seen that a white precipitate is formed, this in the course of six or seven minutes will subside, leaving the water above nice and soft, and you can then have the luxury of washing your hands in the water. The degree of hardness of water is ascertained by finding out how much of a standard solution of soap (in water or spirits of wine) must be added to a certain quantity of the water to produce a permanent lather. I have here a specimen of the pure water and a specimen of Thames water, which I will test in this way, and you will see that in the latter case I require to add many times as much of the soap solution as in the former. This extra soap is really used up in softening the water, and that will give you some idea of the vast quantity of soap wasted daily in London, because the water supplied is of this hard character. By the process I mentioned before it could be softened at the expense of 1½ pence per 1,000,000 gallons, whereas certainly more than 200 times that money must be wasted in soap used only in softening the water required for washing.

FOREIGN MINES.

RIO TINTO.—Nov. 28: Overburden removed during week, 3237 cubic feet. Rain continued, and the production of cement increasing.

NEWFOUNDLAND.—Advices have been received from St. John's of the shipment on the 12th inst. of 180 tons lead ore per Ida.

PORT PHILLIP AND COLONIAL GOLD.—Telegram dated Melbourne Dec. 12: Month ending Dec. 2, yield per ton 5 dwts.

COLORADO TERRIBLE LODGE.—Dec. 14: The agent's advices to hand this morning are dated Nov. 23, 25, and 27. He sends freight-note for 66th and 67th shipments; the 66th was to be despatched on Dec. 2. The yield of the mine during the month of October was 12 tons 1086 lbs. first-class ore, 36 tons 1500 lbs. second-class ore, 228 tons third-class ore, 200 tons third-class rock; total, 477 tons 566 lbs. Shipment 67 consists of 84 sacks first-class ore, 10,441 lbs.; 110 sacks second class ore, 11,057 lbs.; total, 21,498 lbs. The captain of the mine, in his weekly report, says that "The mine is looking exceedingly well all through. I never did see it looking better than what it does now." The agent corroborates the captain, who also says that a great deal of good ore is broken in the mine too fine to be handled, and it goes in the third-class ore to be concentrated next season. [For remainder of Foreign Mines, see to-day's Supplement.]

NEW SHARLSTON COLLIERIES.—We are informed that this company has appointed Mr. Thomas W. Jeffcock, the well-known colliery engineer of Sheffield, as consulting engineer. This appointment is a step in the right direction, and we believe will give confidence to the shareholders.

CHEMICALS AND MINERALS.—(Messrs. R. R. Kelly and Co., Mark-lane, Dec. 18).—Chemicals: Acid, citric, 3s. 6d.; muriatic, 4s. 10s. to 5s.; sulphuric, 3s. 10s. to 4s.; tartaric, 1s. 7d.; Beston's alum, best lump, loose and in barrels, 8s. 5s. to 8s. 10s.; ground, 9s. 5s. to 9s. 10s.; cake alum, 6s. 10s.; am monia, carbonate, 7½d. to 7½d.; muriate, 3s. 10s. to 3s. 10s.; sulphate, white and grey, from 18s. 10s. to 18s. 15s.; brown, 18s.; sal ammoniac, 4s. to 4s. 6s.; arsenic, white powdered, 13s. 10s.; benzole, 30 per cent., 2s. 6d.; 40 per cent., 3s.; bleaching powder, 10s. 3s. to 10s. 15s.; copper sulphate, 2s. 6d. to 2s. 10s.; green and rusty copperas, 6s. to 7s.; Epsom salts, refined, 4s. 10s. to 5s.; potash salts, bichromate, 8½d.; pot. 3s. 6d.; pot. 4s.; chlorate, 10½d.; muriate, 80 per cent., 6s. 10s. to 7s.; f.o.b.; red prussiate, 2s. 9d. to 3s. 9d.; yellow prussiate, 1s. 2d. to 1s. 3d.; tartrate (cream of tartar), French, 6s. 2s. 6d.; salt-petre, refined, 25s. nominal.—Soda Salts: Acetate, 37s.; bicarbonate, 14s. 5s. to 14s. 10s.; borate (borax), refined, 68s.; soda ash, 48 to 50 per cent., 25½d.; soda crystals, 4s. 17s. 6d., ex ship; caustic, cream, 60 per cent., 14s. 15s.; white, 15s. 10s. to 15s. 15s.; 70 per cent. white, 19s.; nitrate, 13s. 3d. to 13s. 6d.; Sulphate Glauber salt, 3s. to 3s. 5s.; salt cake, 3s. 5s. to 3s. 10s.—Minerals: China clay, 25s., f.o.b.; phosphates of lime, ordinary, 60 per cent., 1s.; 80 per cent., 1s. 4d. to 1s. 6d. per unit; Bolivian, 6s. 15s.; Canadian, 80 per cent., 1s. 4d. per unit; Estremadura, 1s. to 1s. 3d.; Curacao guano, 6s. 2s. 6d. U.K. and 6s. 10s. to 7s.; Continent, 70 per cent.; Chrome ores, 6s. to 8s.; copper ores, 15s. 6d. to 18s. the unit; iron ores, red hematites, British, 15s. to 25s. at the mines; Spanish quoted nominally at 17s. to 19s. at British ports; clay ironstone, 13s. to 23s.; colitic, 9s. to 13s.; manganese ores, 70 per cent., 110s. to 120s.; pyrites, cupreous, 8½d.; non-cupreous, 9½d. the unit; antimony ore, 10l. to 12l.

HOLLOWAY'S PILLS.—WEARY OF LIFE.—There are undoubtedly many diseases resulting from undiscovered causes remediable by Holloway's purifying and strengthening medicines, which bear the wholesome effect upon every organ, and accurately adjust its functions. Derangement of the liver is one of the most efficient promoters of depressing thoughts, and the most prolific source of those melancholic forebodings which are worse than death itself. A few doses of these noted pills act magically in expelling vapour or low spirits, and repelling covert attacks on the nerves by excessive heat, impure atmospheres, and indulgence or exhausting excitement. The most shattered constitution may derive benefit from Holloway's pills, which regulate disordered action, brace the nerves, and increase the energy of the faculties.

Mining Correspondence.

BRITISH MINES.

ABERDAUNANT.—8. Toy, Dec. 16: In No. 2 adit level, driving east, the cross-head we met with last week has turned the lode sharply from 30° south of east to 10° north of east. The regular bearing of this lode has been about east and west; we have got through the influence of the cross-head, and it is very likely the lode will soon resume its regular bearing. I have broken some good stones of lead from the bottom of the level this morning. No. 4 stope, above this level, is worth 13d. per cubic fathom for lead. We are making good progress in clearing the lode's shaft.

BAMFYLDE.—James Juleff, Dec. 10: In the 112, driving west of No. 4 shaft, no lode has been taken down for the past week, but when last wrought on it was looking very promising; this end is now going into the ore ground driven on in the 102 and 90 fm. levels, consequently we expect this end to open out some good stopping ground. In the 102 the lode has been influenced by a splice, but it is again improving, and looking more kindly. The 90 end west, on No. 4, is worth 10d. per fathom, and looks well for further improvement. We purpose putting up a rise in back of this level, so as to make an 80 fm. level; we hope and believe it will turn out an excellent piece of stopping ground for copper ore. The stope, six in number, are producing an average quality of copper ore. We have been making some little alterations in the dressing floor, and intend to resume dressing the copper ore again to-morrow, which shall have our best attention.

James Juleff, H. T. Haley, Dec. 12: Stowford Mine: In the end driving east of No. 3 shaft the lode is 6½ ft. wide, yielding 35 tons of iron ore per fathom, and improving for manganese; you will see this end is opening out large quantity of ore. The stope in bottom of level, east of No. 2 shaft, is worth about 15 tons of iron ore per fathom; about 8 fms. east of the present stope there is a lode standing in the bottom of the level, worth 30 tons of iron ore per fathom. The stope in back of the level, west of No. 2 shaft, is worth 30 tons of iron ore per fathom. The stope east of No. 2 shaft, so far as taken down, is worth 10 tons of iron ore per fathom. About 150 fms. east of No. 4 shaft we are cross-cutting north to intersect this lode, and we are daily expecting to intersect it, and as soon as it is met with we will advise you.—Crownborne Mine: The men are still driving south to intersect the south lode. You will see from our report that the Stowford Mine is producing large quantities of iron. We hope to get the engine to work on the road on Monday to send off the iron that is ready for delivery.

BEDFORD UNITED.—W. Phillips, Dec. 17: Operations are being continued by the side of the lode in the different levels of the mine, so that there is very little change to notice. The stope yielding their usual quantity of ore.

ABELSTONE.—J. Neill, Dec. 12: A shaft: The strata being sunk through have not changed in component parts since last week. We still meet with branches carrying good spots of yellow ore and arsenical mundie. The ground has become easier for the past 2 fms., but with the change of ground we have a greater influx of water, caused by the porous nature of the strata round the cross-course. This, together with the late heavy rains, has made the shaft wet, and more troublesome for sinking. With the 16-in. sinking-lift, we are at present obliged to work the wheel seven strokes per minute to cope with the water. The men are working well, and everything is being done to get down as fast as possible. Sun's shaft, 116, 8 in.; depth of shaft, 76 fms. 2 ft. 2 in. I may say that I am pleased to see the strata becoming easier as depth is attained, and to see it so highly mineralised, which, in my opinion, speaks well for the lodes. The shaft has been let to-day, to nine men, stented the ensuing four weeks, at 42s. per fathom.—O Shaft: The stope from the rise in the back of the intermediate level east, on small cross-course, has very much improved within the last day or two. I think it is a continuance of the same shot of ore we have been working on for some time past, only shifted north by the cross-course. I shall be able to say more next week.

BLUET HILLS.—Bennetts, A. Gripe, Dec. 12: The 49 west, on the south part of the Pink lode, is not so tiny as it has been, at present worth 5s. per fathom. A small gossan close by the back of the end has somewhat disordered it. The east end at this level has been holed to other workings, and the ground let on tribute. The Wheal Betsy lode in the 13, east of Wheal Joy shaft, is improving, the lode being better defined and producing some good tinstuff. The winze below this level near the end is worth 8s. per fathom.

BOG.—W. T. Harris, J. Barkell, Dec. 17: The lode in the 173 west continues to yield large quantities of lead ore, worth 5 tons, or 75c., per fathom. There is also a very rich lode in the bottom of the level for upwards of 30 fms. about 100 fms. in the roof there is a good length of profitable stopping ground. The 163, driving west, is not yet through the twitch, or tie, in the lode, but we expect shortly to cut into the same branch of ore now being driven on in the 173. The ditches are looking better, and yielding well of both lead and blende. The frost and snow considerably interferes with driving and other surface work; the teams have also failed to keep the engines supplied with coals. We hope a change in the weather will soon take place. We have sampled 60 tons lead ore, for sale on the 23rd inst.

BURROW AND BURTON.—John Christophers, James Mayne, Dec. 15: In the 62, driving east, a horse of killing, 2 ft. wide, has cut up the lode into two nearly equal parts, which are composed of quartz and a little capel, with spots of copper and mundie. In the 50, driving west, the lode is 2½ ft. wide, composed of quartz, with occasional stones of copper. In the 30, driving east of Tonkin's, the lode is 2 ft. wide, with a very pretty flookan and fine quartz, carrying some good stones of lead and blende, worth for lead 4 cwt., and of blende 1 ton per fathom. In the stope in the back of the 30, west of Tonkin's shaft, the lode is 8 ft. wide, worth for blende 3 tons per fathom. The end, driving west of Tonkin's, is worth 3 tons of blende per fathom for the whole level, or drive. The stope in the back of the 20, on the main lode, and west of Tonkin's shaft, produces about 3½ tons of blende. The stope in the back of the 20, west of Tonkin's, on the north or lead lode, is worth for lead 5 cwt., and 1 ton of blende per fathom. In the winze sinking in the great south cross-cut, on the south underlie lode (which is 2 feet wide, with spots of copper and blende), we are down about 6½ fathoms, and are looking out daily for its junction with the north underlie lode.

Williams's Shaft, or Western Mine: We are making good progress in clearing up this shaft under the 10 fathom level, and in driving on the middle lode in the direction of the junction of the three lodes of this shaft.

CAGEYNOX.—J. Hodge, Dec. 16: We have cleaned up the bottom of the 70 east, and blasted a few holes in the winze, which are showing some good ore. Nothing is doing in the dressing department, everything being frozen up, and the ground covered with snow.

COURT GRANGE.—E. Dunkin, Dec. 17: The men in New Broginan shaft will complete the cutting of this shaft, and will then commence the drive east, which end I am extremely desirous of urging forward to meet the run of ore seen in the adit, and which is dipping towards the shaft very fast, and I think will be met with in the 100 fm. level. The trial shaft, produced about 3½ tons of ore, and is now being worked on. The men are opening up stopping ground payable for working. Lewis's stope, east of engine-shaft cross-cut, and between that and the footway winzes, is productive of lead ore, in branches varying from 1 to 5 in. wide; these appear to be running in the side almost due south, which leads me to suppose the main part of the lode is further south, and the bearing of the level by dialling confirms that belief. Hughes's stope, further east, in the same level, is yielding lead and blende in small quantities—about 10 cwt. of the former and 20 cwt. of the latter per fathom. In the 16 we found it impossible to tram the stuff over the old tramway, so we have been employed in relaying the sleepers, rails, &c., and hope to finish the road this week. In the 30 fm. level nothing is doing beyond clearing the debris both east and west. The 40 fathom level I find is driven about 80 fathoms east and 30 fathoms west of the engine-shaft cross-cut. Considerable stopping has been done in the back of the eastern level, being stopped up to the bottom of the 16, and in the forebrest a quantity of stuff has been tipped into it from above. This end is an important point to extend, for several bunches of ore have been stopped away in the 16 and 30 ahead of this—that is, further east. In the western level a stope has been worked for about 12 fathoms long, but the end of the same is poor in sight. A quantity of stuff has been removed before we can commence working in this level on the ground. Our main pumping engine is going on well, and forking at a fair rate, and I apprehend the mine will be completely drained by the end of the year. The weather has been rather against us the last few days; the upper wheel has been idle for part of the last few days, being frozen up. To-day there has been a slight thaw, and we have started it again.

GREYER AND WHEAL ABRAHAM UNITED.—William Thomas, Samuel Arthur, Dec. 16: In the 228 west the lode is disordered. In the 228, driving east and west of shaft, the lode is 2 ft. wide, and will yield 1½ ton of copper ore per fathom; this end has improved in size and value. In the winze sinking below the 215 the lode is 3 ft. wide, yielding 1½ ton of copper ore per fathom. In the 215, driving west, the lode is 3 ft. wide, producing 2½ tons of copper ore per fathom. The lode in the end has a much better appearance. In the rise in the back of this level, against St. George's shaft, the lode is 3 ft. wide, yielding copper ore to dress; the men are progressing fairly here.—Woolf's Shaft: In the sinking of this shaft about 11 fms. below the 208 the lode is 3 ft. wide, yielding a little copper ore.—Pelly's Engine Shaft: In the 245, driving west, the lode is 2 ft. wide, producing stamping work for tin, and a little copper ore.—Blewitt's Shaft: In the 234, driving west, the lode is 3 ft. wide, yielding good stones of copper. In the 220, driving west, the lode is 6 ft. wide, and will produce 2 tons of copper ore per fathom, and letting out very much water. In the 210, driving west, the lode is 2 ft. wide, yielding copper ore to dress. In the 200, west of shaft, the lode is 3½ ft. wide, producing 3 tons of copper ore per fathom; this end still looks very well. In the winze sinking below the 200 the lode is 4 ft. wide, yielding 1 ton of copper ore per fathom. All the other tubwork bargains continue without change to notice. There are employed this week on tubwork 167 men and boys; on tribute, 44 ditto; at surface, 50; total, 317 men and boys.

CWMYSTWITH.—Dec. 16: The 30 to drive east on the north lode; the lode is 2 ft. wide, showing some nice branches of lead ore, and producing saving work. Michell's cross-cut north, between Kingside and Pugh's workings, is suspended for the present, and we have placed the men to drive east on new lode. In Michell's level west, on the new lode, the lode is 2 ft. wide, at present poor, consequently we have placed the men to drive east, but shall resume the driving of this as soon as we get air machine, &c., to work, which will be some time. In Michell's level east, on the new lode, the lode is 2 ft. wide, at present poor, consequently we have every reason to think that we shall open out some good stopping ground in this level shortly. A cross-cut to drive north in the 15, east of Kingside shaft; during the past month we have seen small strings of lead ore in this cross-cut, but not of any value, but we know that we are not far enough north to cut the main branches. A stope in the back of Kingside adit level, on the Kingside lode, is now set on tribute at 160s. per ton. Our tributaries are getting fair wages, at an average price of 7s. per ton, but cannot say much about the new lode recently cut as yet, but to judge by what has been opened on, and the appearance of the ends we have every reason to think that it will turn out well, and a very fair chance of making a discovery at any time in the old part of the mine. All the machinery is in good repair, and working well. We are pushing on with the dressing as fast as possible, although we have at present a severe frost, but hope to be able to sample 15 tons of lead ore on Tuesday, Dec. 32.

DE BROKE.—T. Hodge and Son, Dec. 12: Setting report: Wilson's shaft to sink below the adit, by nine men, at 16s. per fathom (not yet set). The stope in back of the 25, west of the junction, on the center lode, to two men, at 3s. 3a. per fathom (not yet set); lode worth 10 cwt. of lead per fathom. The rise in back of the 25 west is suspended; the lode is worth 1 ton of lead per fathom. The lode in the back of the 25, west of said rise, to two men, at 4s. 10s. per fathom; the stope will yield 1½ ton per fathom. To stope the bottom of the adit level, west of No. 2 shaft, by two men, at 4s. per fathom; 10 cwt. per fathom. The stope east of said shaft, to four men, at 4s. 12s. 6d. per fathom; worth 1 ton of lead per fathom. **FERRAR.**—John Gidworthy, John Bucknell, Dec. 12: The ground in the engine-shaft (cross-cut south) is in a broken state, and is letting out water freely, showing signs of a lode or branch being near, and a strong copper stain. The

cross-cut is extended south 5 fms. 1 ft. The machinery and pitwork are in good order, and work well.

DENBIGHSHIRE CONSOLIDATED.—John Pryor, Dec. 17: I have very little change to notice since my last, but will report fully in my next. The inclement weather interferes with our outdoor operations, but we have sent off a parcel of 10 tons of ore, and shall make as much progress in this department as possible.

DEVON GREAT CONSOLS.—Jas. Richards, Dec. 17: Wheal Emma Railway Shaft, New South Lode: In Kito's winze the lode is being stripped down below the 115 west, and is worth 3 tons of ore, or 12s. per fathom. In James's rise, in the back of the 100 west, the lode is 2 ft. wide, composed of mundie, capel, quartz, and good stones of ore.—New Shaft, New South Level: In the 145 east the part of the lode carried (5 ft. wide) is still a good course of ore, worth 12 tons, or 72s. per fathom. In the 130 east, on the north part of the lode, 4 ft. thereof is being carried, which is worth 4 tons, or 24s. per fathom.

DUNSEY WHEEL PHOENIX.—W. Skeewis, W. Richards, Dec. 11: There is no particular change in winze-shaft to notice this week, but I may say that the men are still pushing on the sinking with all speed, and I think making fair progress. The driving in the deep adit level, on the course of the lode, is also being carried on with spirit, and I think the men are making fair wages. There is no alteration in the ground this week to notice. The lode is still standing on the side; we think of taking it down next week to test its value.

DYLLIFE.—Edward Evans, Edward Rogers, Dec. 5: Dyllife Lode: In the 120 we have cross-cut north for 28 fms. 1 ft., and expect to cut the lode in about three or four weeks from this time. The 40 is driving east of boundary shaft by six men, at 4s. 12s. per fathom, and has passed through 6 fms. of profitable ore. The lode in the end at the present time is worth 15s. per fathom. The 15 is driving east by six men, at 6s. 5a. per fathom. The lode is 3 ft. wide, composed of spar and blende, with occasional stones of lead ore.—Esgrigale Lode: In the 45 we are carrying up a stope about 5 fathoms in length, in order to cut the productive ground gone down from the level above; the present price for stopping, by four men, is 35s. per fathom; the lode is yielding some good stones of lead ore, but enough to set a value on. There are 66 men employed on tribute, 2 men at 4s. 10s. per ton, 6 men at 4s. 15s., 23 men at 5s., 12 men at 5s. 6s., 14 men at 5s. 10s., and 10 men at 6s. per ton.

E. Evans, E. Rogers, Dec. 16: The cross-cut in the 120 is progressing just as it has been—about 6 ft. per week. In the 40, driving east of boundary shaft, no lode has been taken down since it was last reported; it was then worth 15s. per fathom. We are glad to say that during the past week we have met with a good discovery in the 15 end, driving east of old engine-shaft. The lode is 4 ft. wide, worth from 20s. to 30s. per fathom, and likely to continue for 60 or 70 fathoms in length. There is no alteration in any other part of the mine: 60 tons of lead has been sold to-day to the Panther Lead Company (Limited), at 15s. 16s. per ton, realising 94s.

EAST CHIVERTON.—R. Southey, Dec. 17: The indications of the lode in the 52 fm. level, east of shaft, are of a very cheering character, and a greater quantity of water is flowing from it; the flookan part of the lode in the footwall is also yielding more fine lead than I have ever seen before: the end is being driven by six men, at 2s. 10s. per fathom, and is being pushed forward with all possible dispatch. Good progress is also being made in the drive of the 64 cross-cut, north of engine-shaft, driving with a full pace of men, at 1s. 17s. 6d. per fathom. The cutting of the caunter lode at this depth, the same having made such large quantities of mineral in the adjoining mine, is being watched with great interest throughout the locality, and I have every reason to believe that it will be attended with good results. The lode in the 64 end, west of shaft, is much the same as when last reported on, the same being driven at 2s. 10s. per fathom. The engine is working exceedingly well, and at a very easy cost.

EAST NANT-Y-MWYN.—Thos. Trevithick, Dec. 14: I find the engine-shaft is sunk about 35 fms. from surface. From the bottom of the said shaft there has been driven in the past month about 2 fms. 6 in. east, or properly speaking, a few degrees to the north of east; the lode which it is intended to develop has passed through the shaft 4 or 5 fms. from the bottom of the shaft. The winze in the bottom of the shaft has been cleared up, and the lode has reached the 14 fm. level, and is being driven from the eastern part of this sink, or winze, I brought away two good specimens of lead ore, one of which I broke out of the lode myself. The trial which is now being made at the 35 east will soon prove if the lead ore mentioned above will hold through and improve in depth; judging from the character of the lode I see no reason to doubt but that it will improve. If all should go on well I should think in from two to three months the lode will be satisfactorily opened at the bottom level, and we hope good results will follow. Machinery and pitwork going on well.

EAST WHEAL BASSET.—Richard Pryor and Son, Edward Adams, Dec. 16: The men engaged in clearing the south shaft have reached the 14 fm. level, and are pleased to say that although we are enabled to see but little of the lode at that point, owing to the bad condition of the shaft and level, we are enabled to break fine stones of copper ore therefrom. Our tubwork and tribute bargains throughout the mine are without noteworthy change since last report. We sampled yesterday (computed) 82 tons of good quality copper ore. Friday next being our pay and setting-day a full report shall follow.

EAST WHEAL GRENVILLE.—E. Hosking, W. Bennetts, Dec. 12: There is no change since our setting report. **HOAKING, W. Bennetts, Dec. 17:** The lode in the 130, west of engine-shaft, is 2 ft. wide, and worth 6s. per fathom. The rise above the 130 west is worth 6s. per fathom. The winze below the 120 west is worth 5s. per fathom. There is no particular change in either of the cross-cuts, but we have met with another branch in the 120 north. The rise above the 110 east is not looking so well for copper, but is worth for copper and tin 10s. per fathom. The stope below the 95 east is worth 6s. per fathom.

FLORENCE CONSOLS (Tin).—F. Skeewis, Dec. 16: In our report last week an error has occurred in copying the tin from the copper with great advantage. I looked at the 40, north of Eliza's shaft, instead of "Colena's" read "Colena." and in reference to its breadth, instead of "2 or 3 ft." read "9 ft." We have not yet broken into this lode to follow it, but we have found some good ore from it in going through it, and expect it to improve as we drive on it. Immediately beyond this lode we have driven some distance along the course of the lode we have been following, which has now changed into grey copper ore, yielding 35 per cent. of pure copper average. The lode varies from 6 to 12 in. in width; some parts of the lode, however, yield tin also to an extent of 20 per cent. (4 cwt. to the ton). Our dresser informs me he can separate the tin from the copper with great advantage. I looked at it is a new process. In the end of our 60 cross-cut, from Walter's shaft, copper layers of quartz as feeders are crossing the end, and dipping down ahead of the cross-cut, from which water rises—the best proof of our approaching a lode. At the end of the 60 west, on Millpool Standard lode, we have cut into a new lode crossing it, about 9 or 10 ft., and have not yet got through it; this lode runs north-north-west in the exact direction to where we are expecting the lode at the 60 cross-cut from Walter's, and will very likely prove the same lode. The other parts of the mine are much the same as before.

GAVENHILL.—George Rowe, jun., Dec. 12: The lode in the 117, east of King's engine-shaft, is 4 ft. wide, of a very kindly appearance, producing strong mundie, and good stones of ore. The ground in cross-cut driving south from the 117 west is of a good description for the production of minerals, and moderately easy for progress. The lode in the stope in the back of the 95 is worth 5s. per fathom. The lode in the stope in the bottom of the 82 is worth 9s. per fathom. The lode in the stope in the bottom of the 70 is worth 12s. per fathom. The lode in the rise in the back of the 70 is worth 9s. per fathom. All other points are without change.

GREAT BAY.—Wm. Taylor, Wm. J. Taylor, Dec. 15: In the 75 east we have just cut into a south part of the lode, worth 8s. per fm. this is by a small cross-course, and we hope as we get off its influence the lode will further improve. We have also a good improvement in this level west, worth full 12s. per fathom, in easy ground; this appears to be the commencement of the run of ore ground we have in the middle level over. Middle level west, worth 15s. per fm., we have about 10 ft. more to sink the winze in bottom of the 65 to hole to the rise in back of this level; when this is done it will open out a good piece of ore ground for stopping. This level east is worth 15s. per fathom, and ground favourable. The men are working well, and the lode is worth 8s. to 10s. per fathom. No change to notice in the 52 east, or in rise back of the 45, which we are pushing on as fast as possible. The stope and pitches throughout the mine continue to look very well, varying in value from 10s. to 35s. per fathom.

GORSADD AND CELYN LEVEL.—Wm. Edwards, Dec. 17: In my last report I mentioned an improvement taking place at the Gorsedd lode. On Saturday last we got into good lead, one or two of the lumps brought to surface as much as a man could move. Since this the vein has continued to improve, and is looking better and better, and we are now getting a good deal of stuff, and are not only sinking on it still the men have raised a very good pile. Should this run prove as expected we shall have a large tract of ground intact on its course. The only change to report in the driving towards the Merilyn lode is that a large quantity of water is rushing from below the forebrest, but the adit is equal to any quantity, which is a very great saving. The tributaries have weighed up 16 cwt. and 14½ cwt. of lead ore. I look at our future prospects with great confidence.

GREAT LAXEY.—F. Reddiffe, Dec. 15: In the bottom level in the deep mine there is nothing new to report, except that in the south end the men are now engaged in clearing the lode to its full width to prove it. The 220 end, north of Wesh shaft, has improved; present value 30s. per fathom. The 220, driving west of No. 1 winze, towards the last-named end, has also improved, now worth 40s. per fathom. The stope in the roof of this level is not so good as for some time past, now worth 45s. per fathom. In my last I stated that the 210 north gave good indications of soon again becoming a valuable end for ore; this, I am happy to say, is beginning to be borne out, the present value being 15s. per fathom. In the 200 end the lode is still quite unproductive. The 190 end is still of a very kindly appearance, and producing a little lead ore. No. 2 stope, in the sole of the 190, has become poor, and is stopped. No. 2 stope, in the roof of the same level, has much improved, now worth 100s. per fathom.—Dumbell's: In the bottom, or 200 fathom level, driving north, the lode is worth 16s. per fathom. In the same level south the lode is disordered and split, but we think it will soon take form again, and become productive. In opening the lode to its full width in the 185, at a point about 10 fathoms south of the shaft, the lode is worth 100s. per fathom. The lode in the winze in this level, north of shaft, has suddenly become poor, but from its position we expect it to get into ore again soon. The other points, as well as stope, are without important change. All the water wheels and machinery are in good working order and condition, except the small water-wheel driving the lathe, smith's forges, &c., which was falling to pieces with age, and which we are now replacing with a new one. Good returns are being made from the washing-floors, and everything going on satisfactorily.

GREAT RAKE (Brassington).—W. Feand, Dec. 11: Since my last report we have been driving in the two adits towards Old Rake; it continues very hard. The length driven in the week is a little over a yard; towards the Bonny Lad we have driven over 3 yards. Yesterday I dialed the whole of the mine, and find we shall have to keep well to the north side, as the Rake lies on the north side, and we shall have to cut through this panel. I have been expecting to find a crossing to lead us through, but have not at present done so; the ground will be very kind cutting if we can get through this hard panel.

GREAT RETALLACK.—John Harris, Dec. 12: I have to-day set the 40, to drive east, on the north part of the lode, by six men, at 4s. per fathom, the month; the leader part of the lode is about 4½ ft. wide, and will produce from 6 to 7 tons of blende per fathom; the lode presents good indications for any early improvement.

GREAT SNAEFELL.—H. James, Dec. 14: The lode in the 25 stope is worth 10 cwt. lead and 2 tons blende per fathom. The lode in the 74 end has just come to a nip, but I have no doubt will immediately open again, and possibly be of greater value; we have, however, for the time suspended this winze. The stope from the roof of this level are also discontinued, as they are now near the 60, or next upper level. A little distance behind the present forebrest we have good ore ground both in the roof and sole of the level which will pay for stopping, and this ore ground is yet about 30 fms. in advance of the next deeper, or 85 fm. level.

In the 85 end the lode is 5 ft. wide, in hard and promising ground, and is intermingled throughout with spots of lead and blende. We have also had occasionally good ore both on the hanging and lying walls of the lode, but not yet to value. I look, however, from appearances for an early improvement in this level. The "ump head where before named is long out out preparatory to sinking to the 100, and we have here on the hanging side a good rib of lead and blende 6 to 8 in. wide, which promises well for the discovery of ore. The same is being carried down. The 100 has been driven this month north 3 fms., and south 8 ft.; in both ends the lode is large, and in good hard ground. There are also already in the lode good indications of ore, although we do not expect any decided ore-bearing ground until the level has been extended further from the shaft. Our operations at the Dreeme are discontinued for the winter months.

GREEN HURTH.—Wm. Vipond, Dec. 11: The end south from incline, on No. 1 cross-vein, continues to improve; it is now yielding considerably more ore, and of better quality than it has done for some time, and in this the ground under new south end, where we rather expected it would not prove so good. The stope both above and below adit are all yielding very well, and also the workings both on the east and west sides. The bargains will be on Monday, when I shall send you the price and value of each. Nothing new to notice on old veins. Rutter's level continues a little easier in cross-cutting from the rise south in low level—we find no check yet; we have 14 ft. width of vein now. Our surface men during the snow-storm and archers are repairing middle level, removing rotten timber, and replacing it with new, and heightening some of the lowest places. I do not see I can employ them better at present; if we get this done pretty thoroughly in the winter we shall be able to get them (archers and all) to the wheel-pits and floors outside as soon as the weather is suitable.

HINGTON DOWN CONSOLS.—James Richards, Dec. 17: Bailey's Shaft: In the 150 east the lode is 5 ft. wide, consisting of quartz, capel, mundie, peach, and a little tin and copper ore. In the 150 west, east of Cocking's winze, the lode is 5 ft. wide, and worth 20s. per fathom. In the three stope in the back of the 140 west the lode is still worth on an average 25s. per fathom. In the 120 west the lode is 2½ ft. wide, composed of capel, quartz, mundie, peach, and a little tin and copper ore. The lode in the stope below the 130, in Fitz's winze, is worth 15s. per fathom. The lode in the stope in the bottom of the 120 west, on the north part of the lode, is worth 15s. per fathom. In the 110 west the lode is 2 ft. wide, the leading part thereof being 1 ft., and worth 15s. per fathom. In Brewer's winze, sinking below the 110 west, the lode is worth 8s. per fathom.

ILLOGAN.—R. Pryor and Son, Dec. 15: On Friday last we set the following bargains:—The deep adit cross-cut, to drive south of engine-shaft, by six men, at 8s. per fathom. The composition of the ground is very congenial killas, highly mineralised, and letting out water freely. The shaft to sink on the copper lode, by three men, at 5s. per fathom; the lode is 2½ ft. wide, producing good stones of copper ore, with a promising appearance. At surface, all things are progressing fairly, and our pay and setting passed off satisfactorily.

LADYWELL.—A. Waters, Dec. 17: No change here to write about for the past week. The weather is so severe that we cannot go on with any building operations.

MELINDUR VALLEY (Lead).—John Kitto, Dec. 11: We have commenced to sink the main engine-shaft below the 14, and shall push it on with full force until we reach the 26, when we shall again drive out both east and west on the lode. This shaft is being sunk on the course of the lode, and is already producing some ore, but I expect it will further improve as we get deeper. The lode in the 14 fm. level, driving east from the engine-shaft, is at present poor, but we have some nice bunches of ore ahead of this end, and we are pushing on towards them as rapidly as possible. The ground here is of the very best description for the production of lead ore, and on reaching the bunches referred to above, which were discovered in the driving of the adit level, I expect to find them very much improved. The driving of the adit level cross-cut towards the north lode is being vigorously proceeded with, and very fair progress is being made. The character of the ground through which we are driving is everything we can wish for, and should we intersect the lode in the same class of rock the result cannot fail to be highly satisfactory. This is a most important point, and is being looked forward to with very great interest by those living in the immediate neighbourhood. The stope in the adit level still continues to yield very good ore, and the dressing-floors are fully supplied with stuff. We have delivered the 25 tons of lead ore sold to the St. Helen's Smelting Company, and have about 15 tons now in the bin towards our next sampling, so you see from what we have already done that we shall very soon have another 25 tons ready for sale.

NEW CONSOLS.—R. Pryor, T. Jenkin, H. Vial, Dec. 15: On Saturday last we set the following:—Phillip's engine-shaft, to sink below the 86 fm. level, by 12 men, at 55s. per fathom. The lode is still being sunk in the capel, between the north and south parts of the lode. To drive the 86 fm. level, east of Phillip's engine-shaft, by six men, at 12s. per fathom; the lode for the part carried is 5 ft. wide, and producing good quality stuff for copper, tin, and arsenic. To drive the 86 west (in order to cut through the north part of the lode), by four men, at 14s. per fathom. To rise in back of the 86, on the south lode, at 15s. per fathom; our object here is to communicate with the winze sunk about 7 fms. above the level above, which, when accomplished, will lay open a splendid piece of tin ground. The 50, to drive east of Phillip's shaft, by four men, at 10s. per fathom; the lode is very large, and producing a very good quality of stuff for copper, tin, and arsenic. At Brodgate we have completed everything connected with the engine, and are now ready to work the same. All things at surface are progressing satisfactorily. Our pay and setting passed off well.

NEW ROSEWARNE.—E. Hosking, W. Bennetts, Dec. 12: The lode in the 67, west of Pool's shaft, is 3½ ft. wide, and producing a little tin. The rise above the 58, west of Pool's shaft, is worth for copper ore 5s. per fathom. The winze below the 46, west of Pool's shaft, is worth for copper ore 4s. per fathom. We expect to hole the winze to the rise in the course of next week.

NORTH POOL.—R. Pryor and Son, Dec. 17: I think we have the lode at last. I wrote to you yesterday that I had, after my inspection on Tuesday, placed the men to open eastward on a branch that had been passed through about 9 ft. behind the end, and that we had broken from it a stone of good yellow copper ore. I have now the pleasure of informing you that in stripping down the side of the cross-cut to give room for opening on this branch we find it all more or less lode for a width of 9 ft., and containing a tolerably good proportion of yellow copper ore, with some grey. You will please understand that we have only yet stripped down about 1 foot of the side, and consequently it is mixed a great deal with cross-course matter, but still, as far as we are yet gone, the same as for some time past. There is the 30, west of cross-course, are still not yielding quite up to the mark; although the lode maintains its usual width (12 ft.), it is corrupted or mixed up with hard chert or spar, but we hope it will soon wear out again. The ground in the trial cross-cut at the 65 is favourable for driving, and good progress is being made. The tribute pitches are on the whole looking pretty well. The severe weather we are now having somewhat interferes with our surface operations, and has thrown us back a day or two in dressing our ores. We purpose sampling next week a parcel of No. 1 copper ore—about 50 tons.

NORTH TREBERRY.—R. Pryor and Son, Dec. 16: The deep adit cross-cut, driving north of the new shaft, is not as yet through the lode, although we have cut into the same fully 12 ft. No other change to notice during the past week.

OLD BOTTLE HILL.—R. Unsworth, Dec. 16: In the 46, east of Rowe's shaft, on Bucking-house lode, the lode is 1 ft. wide, with good stones of copper ore, but not enough to value. In the winze below the 36, east of Rowe's shaft, the lode is 1½ ft. wide, worth for copper about 5s. per fathom. The tribute pitches much the same as last reported.

OLD TINCOPPE CONSOLS.—J. Pope, Dec. 17: In the 30, west of Dymond's shaft, the lode is 20 in. wide, producing a very good quality of tinstone. In the 10 west the lode is 18 in. wide, producing average quality tinstone. In the adit east, on the south lode, the lode is 1 ft. wide, producing saving work for tin.

OLD TREBURGETT.—W. Hancock, W. T. Bryant, Dec. 16: There is no change calling for remark since our report of last week. The shaftmen are engaged fixing the work in shaft. The impeller was delivered on the mine yesterday, the water-wheel, &c., is in course of making to work it. Our last sale of ores weighed off 1326s. 4s. 9d., and we are as usual preparing another parcel; weather rather severe.

FARNS MOUNTAIN.—T. Mitchell, Dec. 16: The several stope throughout the mine are yielding much the same as for some time past. There is the 30, west of cross-course, are still not yielding quite up to the mark; although the lode maintains its usual width (12 ft.), it is corrupted or mixed up with hard chert or spar, but we hope it will soon wear out again. The ground in the trial cross-cut at the 65 is favourable for driving, and good progress is being made. The tribute pitches are on the whole looking pretty well. The severe weather we are now having somewhat interferes with our surface operations, and has thrown us back a day or two in dressing our ores. We purpose sampling next week a parcel of No. 1 copper ore—about 50 tons.

PEDY-AND-DREU UNITED.—W. Treg

surface to the 24. At the point of communication the lode produces 1½ ton of lead ore per fathom. All other bargains throughout continue without any material change since last report. The lode is very rich, and the ore is very good, nothing being done during the past few days in drawing and dressing. We are completely blocked up. Our pumping-wheel is with difficulty kept going; but I fear unless we have a change soon this will also be frozen up.

PORT NUEL.—J. Manley, Dec. 17: The 34 to drive east of engine-shaft, by four men, at 90. 10s. per fathom, worth 25 cwt. of lead ore per fathom. We have a good lode in the bottom of this end. The lode in the rise over this level is producing good stones of lead, and I look for an improvement here as soon as we get up from the influence of the slide. I shall set this bargain as soon as the men clear their stuff. In the 44, east of shaft, we have a very strong lode, yielding good lumps of lead ore, of a very promising character. This end is suspended for the present, and the men put to rise against the winze, but as soon as a communication is effected driving of this level will be resumed. The rise in the back of the 44 east is set to six men, at 75. 10s. per fathom; lode worth 30 cwt. of lead ore per fathom. The slope in the back of the 44 is set to four men, at 40. per fathom, and is worth 30 cwt. of lead ore per fathom. The engine-shaft is now down 4½ fms. below the 44; the lode is large, and yielding good stones of lead ore. During the past few days the shaftmen have been engaged in raising bearers for timber, which they will complete to-day. Sinking will now be urged on, and I hope to reach the required depth for the 56 by the time specified. Drawing and dressing will now be pushed on with all speed. Machinery and pitwork are working well.

ROMAN GRAVELS.—A. Waters, Dec. 17: There is no material change worthy of notice in the mine since last week's report. We have not had such a depth of snow as that now on the ground since the company has been in existence. We are going on with dressing operations as fast as the weather permits.

ROSEWALL HILL AND RANSOM UNITED.—William Bugelholme, J. White, Dec. 17: Standard Lode. The lode in the 60 fm. level, driving west of the Ransom shaft, is 1½ ft. wide, yielding a little tin. The lode in the slope in the back of this level is 2½ ft. wide, worth 12. per fathom. The 70 and 80 fm. levels are poor and suspended for the present. The 90, driving west of the north carbons, is showing a little sign of improvement; in the present end we have a branch 6 in. wide, yielding some good stones of tin. The north carbons are set on tribute; lode worth 15. per fathom. Goole Pellas: Middle Lode. The lode in the new flat-roof shaft, sinking below the 26 fm. level, still maintains its size and value—3 ft. wide, and worth 30. per fathom. The lode in the 25 fm. level, driving west, is improved since our last report; now 15 in. wide, and worth 8. per fathom. The 26, driving east, is not looking so well as when last reported on; it now yields a little tin, but not enough to value. Goole Pellas Lode: We are happy to say that we have a marked change for the better; in the 25 east yesterday we discovered a rich branch of tin 6 in. wide on the footwall, worth 8. per fathom. The western end is also showing a little improvement. In the deep adit level, west of Wheel Mary shaft, good progress is being made. Our tribute pitches in the old mine are not looking so well as when last reported on, and we are sorry to add that owing to the recent heavy rains we have the greatest difficulty to keep the water at Goole Pellas.

SOUTH BWADRAIN.—Sydney Roberts, Dec. 16: Since my last report we have completed the line of machinery, both at the surface and underground, and have dropped the lift of pumps from the adit to the 12 fm. level, and attached the same, so that our pumping machinery is now complete, and I am glad to say it is working as well as we could possibly wish or desire. We are now busily engaged about the drawing machine, and fixing the necessary machinery for it at surface, and I hope in my next report to be able to give you word of its completion and of its being at work. I intend at first to draw with a whim kibble, until we have laid open sufficient ground for stopping, and then to replace it by putting in a skip-rod, and drawing with skip. The ground for turning the brook has been cleared, and produced excellent stones for turning the arch over it, and this will be done the moment frost will allow us to do so. We shall now soon have our machinery at work, and shall be enabled to sink our underground shaft, and to sink the sinking of engine-shaft, &c. In conclusion, I am proud to say that all is going and has been carried on to my entire satisfaction, and I have no fear that it will be most satisfactory to all parties interested in the property whenever they may choose to inspect it. The time of year it has been completed will now enable us to push on with all other work most economically.

SOUTH CARN BREA.—Wm. Rich, J. Knotwell, Dec. 16: The lode in the 164, west of engine-shaft, is composed of fluor-spar and good stones of copper ore. The ground in the 164 is rather dry, but it has been, but the lode is unproductive; we have however, arguing on this drive, at six men, at 12. per fathom, the bottom of the 150, before this end, yields good stones of tin. The lode in the 150 east is worth 10. per fathom. The slopes in the back of the 150 are nearly exhausted. There is a capital lode in the bottom of the 150, but the water is so much at this time of the year that we can do but little towards working it till the lode is drained by the 164 below, or the new shaft made complete down on the ore.

SOUTH DARREN.—John Boundy, W. H. Boundy, Dec. 15: Setting Report: The weather here for the last fortnight has been very rough—frost, snow, and excessive rains—so much that the water in the mine has completely overpowered the engine, in consequence of which nothing has been done in the 90 west during the last week, but we hope to have the mine in fork soon, and the men resume their bargains at the 90 again. The 80 to drive west by six men, at 12. per fathom, the lode is 2½ ft. wide, worth for lead and copper 11. per fathom, with a promising appearance for improvement. To stop the back over the 80, west of shaft, by four men, at 55. per fathom; the lode is 2 ft. wide, worth for lead and copper 13. per fathom. To stop the back over the 80, west from the winze, by six men, at 55. per fathom; the lode is 3 ft. wide, worth for lead and copper 15. per fm. The 70 to drive west by four men, at 10. 10s. per fm.; the lode is 2 ft. wide, worth for lead and copper 12. per fathom; from the present appearance of the lode at this point we have every reason to expect improvement as the level is being extended. To stop the back over the 70, west by six men, at 12. per fathom, the lode is 3 ft. wide, worth for lead and copper 12. per fathom. To sink a winze below the 60 to meet the 70 west by six men, at 12. 10s. per fathom. Drawing and dressing being pushed forward.

SOUTH PRINCE PATRICK.—John Jones, Dec. 16: I am happy to inform you that I expect the worst is over with us now, as we have cleared the water and commenced working at midday on Monday, and have been drawing leadstuff to-day; but as they have been so long occupied with the water, they have not opened enough ground to see any alteration in the drive. I trust they will not be troubled with so much rain again this season, as it has been very hard, and we have had a heavy snowfall last night, but still, the frost will interfere, more or less, with the washing operations. You may feel assured that I am very glad to see the mine free of water once more, as it caused me great uneasiness, seeing rain falling almost continually for at least a month, and in such a quantity, that we have not experienced the same for the same length of time for the last 15 years, so that although the swallow in Parry's lode takes all water in general, the long continuance of the rain at last brought it down to too great a quantity for it to take it this time.

SOUTH ROMAN GRAVELS.—J. W. Powning, Dec. 16: Sheffield: On cutting tip lode under the 20 we are under the necessity of stripping down the lode not carried in the last 2 fms. sinking of shaft. In so doing I am pleased to inform you we have met with a fine lode of tin, and have no doubt, we have no doubt, we have the lode 6 ft. wide, and have not yet reached the footwall, consequently cannot give its size and value; this I hope to do in next report. The lode in the 20 east is quite 4½ ft. wide, and is improving daily; I believe we shall soon have a good run of ore here. In the 20 west the lode in the forebrest does not look quite so well as last reported, now worth 20 cwt. per fathom. There is a tie in the cavity which seems to have caused the change; we shall soon, however, be through it, when I believe we shall find the lode equally as good. The lode in the 10 west is of a most promising character, and is yielding good stones of tin.

SOUTH TOLCARE.—Joseph Vivian and Sons, Dec. 17: We beg to inform you that the lode in the engine-shaft is improving in size and character, and producing copper ore and tin. There is nothing to notice in other parts.

SOUTH WARD.—R. Goldworthy, Dec. 16: In sinking Thomas's engine-shaft we have met with a hard floor of ground, consequently, the sinking is not so fast as could be desired. In the 72 cross-cut east the ground has improved, and better progress is now being made. In the 40 south the lode is much disordered by a large slide just passed through North Hope lode. In the 60 north the lode is opening out wider, but the level south has been levelled, and the lode is now 3 ft. wide, through the slide, with no appearance of the south wall. The lode is still going on, although split up the main part, being 8 in. wide, and I am led to hope for favourable results as soon as we get through the slide.

ST. AGNES CONSOLS.—W. Vivian, Dec. 17: We have resumed the sinking of the engine-shaft below the 74, with nine men, at 25. per fathom. We purpose pushing the shaft down to intersect Wheel Kitty south lode with all practical speed. At the 74, driving north of the engine-shaft, with six men, to intersect Wheel Rook lode, there is no change to notice since last week. At the 74, driving west of the cross-cut, the lode is 4 ft. wide, very kindly in appearance, composed of muddle, copper ore, and tin.

ST. DAVID'S.—John Jones, Dec. 18: I have nothing new to report on Edward's shaft, everything looking about the same as last week. The six men at Jones's shaft have not been able to get on so well as last week, owing to the old timber giving way. We have been compelled to suspend our washing operations entirely on account of the hard frost.

ST. JUST AMALGAMATED.—R. Pryor and Son, Wm. Bowden, T. Richards, Dec. 16: The lode in Savell's engine-shaft, sinking below the 30, is without change since last report. The lode in the 20, driving west of engine-shaft, is worth 15. per fathom, with every appearance of improving. The lode in the 110, driving west of the shaft, is worth 20. per fathom, with a good appearance. The tribute department of the mine continues just as for some time past. We have observed no further change during the past week requiring remark.

TANKERVILLE.—A. Waters, Dec. 17: The lode in the 152, in the winze below the 140, in the 140 end, as well as in the 120, all west of engine-shaft, is looking very well indeed, each place being quite up to the value put upon it in the last setting report. In fact, the mine, which was looking better than it did last week. We have sold 100 tons of lead ore, realising 157. 12s. per ton.

TAN-YR-ALLT (Cardiganshire).—J. Davis, Dec. 17: We have had the engine at work crushing since Tuesday, but owing to the frost the dressing was stopped on Wednesday morning; we have, however, continued crushing the pile of second ore, so as to be ready to dress it when the frost ceases, if only for a day, without getting up steam. We have taken down the lode in the south end, and find it has again improved, the lead-bearing part being from half-a-yard to 2 ft. wide, of which 12 in. is as solid as any we had before, and in places in the sole of the level it is even better than this, and we have not yet found the footwall of the lode, for which we must put in a short cross-cut. We have had a great improvement in the No. 3 winze, which, it will be remembered, is about 17 fms. south of the south end in the 12, at a depth of about 9 fms. below the adit. We have cut very fine lead, not near as good as that end, but as it was at almost exactly 9 fms. that we cut the rich ore in the No. 2 winze, I am in hopes before we get down to 12 fms. we shall have as good ore there as in any part of the mine. At present the lode is worth from a ton to a ton and a half per fathom. We have got about 4 tons of lead to-day from taking down 5 ft. of the lode in the south end.

TEESDALE.—J. Kneebone, Dec. 17: The lode in the 100, north of engine-shaft, has been driven 5 fms. during the past month, and has opened a fine course of ore, going up in the roof, ranging from 14 in. to 22 in. wide, of nearly solid ore, worth 75. per fathom. It does not come more than 3 ft. down from the roof as yet in the part of the vein we have been taking; but the men will now proceed to cut through to the back of the vein to see if any more ore is lying behind it. South of Shaft: Three men have been employed raising ore and making trials south of shaft in Holmes' level, where we have one place worth two bins of lead ore per fathom, and two other places worth one bin each per fathom. They have also been raising ore at the 7, at the north shaft, where the vein will yield three bins per fathom. Hopkins' level has been enlarged and arched 2 fms. 3 ft., and is now nearly through the badly-crushed ground; arched 19 fm. 4 ft. Owing to heavy snow and severe frost they are suspended, there being difficulty in getting stones,

which cannot afterwards be used, owing to the frost. Sand Lyke level is suspended during winter.

TEESDALE.—John Kneebone, Dec. 14: The men have broken further into the vein in the forelead, north of engine-shaft, where we find a foot more of vein in the rock above. It shows a vein altogether, and the next step should be to prepare to set it in a level, and to make it as stable as, as if it continues so good for a distance forward it is likely to return all the expenses of the new level.

TRELEIGH WOOD.—E. Hosking, W. Goldworthy, Dec. 16: On Saturday night we had a slight breakage; this, with the heavy floods last week caused the water to rise above the 41, and the slopes at that level are for the present idle. The weather has been better during the last two or three days, and we are again forking the water, and hope shortly to drain the level and resume stopping. The engine at Rosewarne United will be taken out this week, and as soon as the repairs are finished no time will be lost in erecting the same. There is no change in the slopes and the 84 east. Friday next being setting-day, we will send a full report on Saturday.

TREVAIRRAK.—J. Pope, Dec. 17: We have completed the skip-rod to the 74, and commenced cutting flat in that level. In the 74 east the lode is 3½ ft. wide, composed of peach and iron, with stones of tin; also the stratum is now a red granite, in which all the mines in this district make the best bunches of tin. In the 60 fm. level east the lode is 2 ft. wide, composed of peach, muddle, and iron, with a little tin.

TYLWY.—Capt. J. Paul, Dec. 17: During the past month the south-west level has been extended 2 fms. 4 in. in the 4 to 5 ft. level, producing about 1 ton 5 cwt. of lead ore per fathom. At present there is an alteration in the ground in consequence of a slide crossing the end, which has rather disordered the lode. This, we hope, will soon disappear, and the lode resume its former character; now producing 10 cwt. of lead ore per fathom; set to six men, at 170s. per fathom. The lode in the 20 fm. level, west of cross-cut, is 3 ft. wide, and will yield fully 1 ton 5 cwt. of lead ore per fathom. This level has been driven 3 fms. 2 ft. 10 in. during the past month. In this drive the lode has yielded 1 ton per fathom, but at present is looking better; set to six men, at 140s. per fathom. We shall now begin to sink the shaft 12 months level, in order to ventilate this point and lay open this section of ore ground for stopping, by the time we have the machinery erected. I am sorry to say we are now idle in our building operations in consequence of severe frost, which has set in for the last few days; before this we were getting on with our surface work very satisfactorily. Machinery all in good order and going well.

WEST ESQUIRE.—R. Harvey, Dec. 16: Last night we had a very heavy snow storm, such as has not been experienced here for many years, which has entirely blocked up the water-course, and stopped the whole of the wheels, consequently the 34 level is now 22 cwt. of lead ore per fathom, at 4 ft. wide, on the east part of the lode, so as to communicate with the winze as early as possible. The ore-bearing part of the lode is standing to the north of us, therefore we shall not be able to value this end until we commence taking down this portion of the lode; the part we are carrying is producing some rich copper ore. There is no change worthy of remark in the 24, west, with the exception that we have sunk the winze in the 10 about 2 fms.; this looks well, inasmuch as it clearly shows that we have a part of this end and the winze, a distance of 15 fms., and we have no doubt there are some rich courses of ore in this length. The tribute pitches in the back of the 10 are looking remarkably well, and from present appearances I have not the least hesitation in stating that it will continue equally as productive to surface—a distance of 30 fms.—which, of course, would be most important. The slopes in western mine are without any material change in value, the whole looking well. As soon as a change in the weather takes place we shall resume cutting off the ore to station with full dispatch.

WEST GOLDFIELD.—J. Pope, Dec. 16: The setting report states that the 60 fm. level north, driving on counter, has been set to six men, at 55. per fathom; set to six men, at 18. per fathom. The 50 winze south, to sink by nine men, at 18. per fathom. The 50 south, to drive by four men, at 40. per fathom. The 40 north, to six men, at 11. to the 20, and to rise at 4. per fathom. The 30 south, to drive by two men, at 11. to the 20 south, to drive by two men, at 11. The new shaft, to sink by two men, at 9. The 50 east is driving, on the South Hope lode, by two men. The deep adit, driving on the same lode, is set to two men, at 30. On tribute one pitch is set to two men, at 5s. in 11. to two five men, at 6s. 8d.; two to eight men, at 10s.; and eight to 14 men, at 11s. in 11. The tributes are paid the rate of 50s. per ton for tin raised. The machinery is working well. We sold on Dec. 12 to Messrs. Bolitho and Sons, 7 tons 18 cwt. 8 qrs. 2 lbs. of tin, at 55s. 5d.—444s. 8d. for the parcel.

WEST MARIA AND FORTESCUE.—William Skevis, Noah Coward, Dec. 17: West Maria Lode: The only alteration to note in the 104 west is that the lode is more compact and settled in character than it was last week. The lode in the 93 west is producing saving work for copper and muddle, and appears to be going larger as extended upon west. The slope in the bottom of the 93 west continues worth 30. per fathom. In the slope in the back of the 93 there has been no lode taken down since last report, as the 93 west has been going up by the side of the lode, and to-day's dry weather has been reported. The lode in the 93 west is without change. North Lode: The slope in the back of the 71 west is worth 25. per fathom.

WEST MILLW.—W. Francis, Dec. 16: The same favourable features continue in the cross-cut south from West Meadow shaft, and new points are continually being intersected with a good mixture of lead ore and blende.

WEST TANKERVILLE.—A. Waters, Dec. 17: The south boundary shaft, sinking below the 50, is in a lode worth 1½ ton of lead ore per fathom. The slope in the back of the 50, north of shaft, is worth 1½ ton of lead ore per fathom. The slope in the back of the 50, south of shaft, is also worth 1½ ton of lead ore per fathom. The 46, going north of Junction on No. 2 counter, is worth 2 tons of lead ore per fathom. The country all about is buried in snow, and dressing operations all but suspended.

WEST WHEEL TOLCARE.—Dec. 17: The following is the setting list:—You will see that we have not raised any ore from the 115, nor below, for the past month, and have only reckoned on getting 60 tons for the present month. The water in the mine below the 105 still, but we should hope the water would be out and the mine raised, and we have reckoned on for the month. Since the breakage of the rod in Richards' shaft it has been repaired, both the engines have been working very well, but we are afraid to drive Taylor's engine more than 7½ or 7¾ strokes per minute, as one of the rods below the 85 has been repaired with iron plates, and is looking strong and safe, but we are afraid to drive the engine faster. The water is not yet below the 105; we had to stop the engine yesterday from three to four hours to have the 95 stuffing box, to make a new joint. It was running so fast that we could not fork, and with the great quantity of rain that has fallen in the past few days we are hard driven to keep things tight, and yesterday we had to stop the engine, as the water was so high, and the engine was not quite so good as we called it; there is no 125 ore with it, which is by far the best quality. The tribute pitches at Richards' shaft are turning out very well. There are four in the back of the 55, three east of shaft, and one west, at the following tributes:—One to two men, at 7s. in 11.; one to two men, at 7s. 6d. in 11.; one to four men, at 6s. in 11.; and one to four men, at 4s. 6d. in 11. **WHEEL ALLEN (Silver-Lead).**—Wm. Vine, Dec. 9: This is one of the finest silver-lead districts in the county of Cornwall. The men have driven a cross-cut to intersect the lode in the 25 fms. level, and when intersected the lode was about 2 ft. wide. Since then they have driven on the course of the lode about 11 fms., and it varies in size from 3 to 6 ft. wide, and is composed of flookan, quartz, muddle, and silver-lead ore. A more congenial lode than this for making large deposits of ore at a few fathoms deeper I never saw. My advice is to continue on the drive of this lode for about 50 fathoms, as by so doing it will take the rise in the hill about 20 fms. deeper than at the present point. I would also advise you to work it yourself until you get to a deeper point, which will, I believe, enhance the property very considerably. I could not see the eastern lode, but from the nature of the surface of the level, day, it is very promising lode. In my opinion you need not fear any mining agent inspecting this property.

John Scoble, Dec. 12: A cross-cut adit has been driven east to cut the western lode 26 fms., and the lode intersected 10 fms. from surface. A level has been driven south on the course of the lode 12 fms.; the average width of the lode is about 4 ft., and it is composed of gossan, flookan, muddle, priam, and silver-lead ore—as fine a looking lode as can be seen at such a shallow depth. The lode has greatly improved the last 3 or 4 fms. driving, and every indication for further improvement as we examine level farther south into the hill. I have broken some very fine ore from the bottom of the level, day, and believe the depth should be attained the lode will turn out large quantities of silver-lead ore. Looking at the advantages of this mine, the Cornwall Railway, and a never-failing stream of water passing through the set, it is a great pity the necessary machinery is not put up at once. I never saw a finer lode than the western at such a depth; it is very masterly, with two well-defined walls, and is composed of everything that is kindly for the production of silver-lead ore.

WHEEL ARGUS.—T. Trahair, Dec. 16: There is no change in the mine. The machinery is working well. The character of the tinstuff now stamping is just the same as it has been for the last four weeks.

WHEEL COATES.—W. H. Martin, Dec. 17: The lode in the engine-shaft maintains its produce for tin as formerly advised; we cannot say the extent of this tin as yet, as we have not seen the south, or foot wall. This lode is of great promise, and, from present indications, will add considerably to the value of this property. The lode in the 30 north cross-cut is of a low produce for tin; the men are still cross-cutting in the lode.

WHEEL CREBOR.—J. Andrews, Dec. 16: Both the 120 and 108 ends are without change. The lode in the slope in the bottom of the 120 is worth 20. per fathom. The lode in the slope in the back of the 120, east of rise, is worth 30. per fathom. The lode in the end and slope, 4 fms. above the back of the 120, east of the eastern pass, is 4 ft. wide, worth 12. per fathom. The lode in the 72 east is 4 ft. wide, composed of quartz, capel, and muddle. In the 48 east we are driving by side of lode.

WHEEL GREENVILLE.—E. Hosking, W. Bennetts, Dec. 12: The shaftmen have completed the penthouse at the 180, and are now sinking below that level. The lode in the 150, east of cross-cut, is worth 25. per fathom. The lode in the 150, west of cross-cut, is worth 15. per fathom. The slope below the 140, east of rise, is worth 12. per fathom. The lode in the 140, east of cross-cut, is worth 10. per fathom. The slope above the 140, east of cross-cut, is worth 15. per fm. The slope above the 140, east and west of rise, is worth 15. per fathom. There is no change in either of the 130 cross-cut north. The lode in the 130 east, on old tin lode, is 18 in. wide, yielding saving work. The slope above the 120 east is worth 8. per fathom. The slope above the 120, west of rise, is worth 12. per fathom. The slope below the 110 east is worth 12. per fathom.

WHEEL MARY HUTCHINGS.—H. Miners, Dec. 16: The mine is looking much the same as when last reported, and the different points of the mine are producing their usual quantity of tin, and there has been a little higher price for that metal we could, with the sales of muddle which we are now beginning to effect, pay cost, and leave a profit.

WHEEL UNY.—W. Rich, M. Rogers, W. Rich, Jan., Dec. 12: The 160 end, east of the pump-shaft, is worth 7. per fathom. The 160 west is unproductive. The rise in back of the 150 west carries stones of tin. The 150 end, east of Gooding's, is looking promising to improve. The 140, east of King's, is worth 8. per fathom. The 140, west of the incline shaft, is worth 15. per fathom. The 120 west carries stones of tin. The 120 east is worth 12. per fathom. The 120 east is worth 15. per fathom. The 110 east is worth 12. per fathom. The 100 east is worth 8. per fathom. The rise in the back of the 120, west of incline, is worth 10. per fathom. The 40 end west is worth 6. per fathom. We have cleared out the 30, and intend to sink a winze in this level as soon as possible.

WHITEHAVEN IRON MINES.—T. Rosewarne, Dec. 16: I beg to hand you the report of progress made for the three weeks ending Dec. 12. Midway drift has been driven, by two men, 4 fms. 4 ft. 6 in., at 3. per fathom; the lode is showing a better appearance. No. 1 drift has been driven 10 fms. 1 ft. 3 in., by four men, at 30. 10s. and 25. per fathom. The lode is large, and of a very promising character. It is now chiefly composed of manganese and hard lumps of hematite ore, and is giving out a large quantity of water. There is every appearance that we shall soon meet with a large body of ore in this drift. Side vein No. 1 drift has

been driven, by one man and one boy, 4 fms. 3 ft. 4 in., at 2. 15s. per fathom. The lode will at present yield about 9 tons of ore per fathom, of the best quality. We have stopped the stoping for the present. Intermediate drift has been driven by four men, 5 fms. 2 ft. 4 in., at 6. per fathom, through a good lode of ore, yielding from 10 to 15 tons of ore per fathom. New drift, driving south of rise, has been driven, by four men, 7 fms. 3 ft. 8 in., at 4. per fathom. The lode is large and will yield from 15 to 20 tons of ore per fathom. I am expecting to hole these two drifts to each other every hour, as soon as this is accomplished I will let you know. I think it will be advisable, as soon as these men have finished their contracts, to put six of them to put the rise through to No. 1 drift above, and two to cross-cut the lode to prove its width and value. Side vein in No. 2 drift has been driven 5 fms. 3 ft. 9 in., at 5. per fathom, by four men, the lode is a little improved. We have suspended the driving of this drift for the present. No. 3 drift has been driven 2 fms. 1 ft., by four men, at 10. and 8. per fathom, and they have taken down the side of the level to prove the width of the lode, for 30. 10s. per fathom, as per contract. The lode is of a very promising character. Side vein No. 3 drift has been driven 1 fm. 4 ft. 5 in., by two men, at 8. 10s. per fathom; yield of ore in the lode about 5 tons per fathom. This drift is suspended for the present. No. 4 drift has been driven, by six men, 4 fms. 2 ft. 9 in., at 7. 10s. per fathom. This drift is well-nigh under the large body of ore that the old men had in No. 3 drift above. The appearance of the lode is so kindly that I think we shall meet with the same bunch of ore here. No. 5 drift has been driven 5 fms. 4 ft., by six men, at 8. 10s. and 6. 10s. per fathom. The ground has become very hard and spar for driving, and the lode is not so good as when last reported on. This drift is now about 10 fms. behind the one we had in No. 4 drift above. I am having this level pushed on with six men as fast as possible. No. 2 drift, at Blea Tarn, has been driven, by two men, 3 fms. 5 ft. 3 in., at 5. and 3. per fathom; we have also suspended this drift. No. 2 drift, Ben Garth, has been driven 2 fms. 3 ft. 9 in., by three men and one boy, at 10. and 7. per fathom. The lode is not to value at present, but is showing a very kindly appearance for making ore. The weather has been so rough this last week that we have not been able to do anything by extending the incline road. The ore carted to Drigg during the past three weeks has been 136 tons 9 cwt.

THE VAN MINES—MONTHLY REPORT.

Dec. 16.—The 90 cross-cut has been driven north 3 fms.; we have about 7 fms. more to drive to reach the main lode. We are having nice patches of ore occasionally in flers from the main lode, in the country rock, which proves that we have not reached as yet the bottom of the bearing measures. The 75, west of shaft, has for the last fathom or so been driving through a twitch, or knot of agate, poor for lead; but during the last day or two it has begun to open out again, as it is now worth about 20. per cubic fathom for lead ore. The same level, east of shaft, is improving, now worth 30. per cubic fathom for lead ore. A few fathoms more driving will put us far enough to get under the rich course of ore seen going down in bottom of the 60, east of shaft. The slope in back of the 75, west of shaft, is worth 34. per cubic fathom for lead ore. The 60, west of shaft, is worth for lead ore 60. per cubic fathom. The cross-cut into the lode at a point 90 fms. west of shaft, from the 60 in the soft, has been driven 2 fms. through a lode worth for lead 60. per cubic fathom. This cross-cut is 15 fms. in advance of the 60, driving upon the course of the lode. The lode above this point, in the 45, is 7 fms. wide, and we have every reason to expect finding it the same here. The 35 winze, below the 60, is sunk 6 fms. in a lode worth 10. per cubic fathom for lead ore per cubic fathom. The points at which the lode is being taken down in the side of the 60, west of shaft, is worth 21. per cubic fathom; the average width, so far as seen, is 17 ft. The five slopes in back of the 60, west of shaft, are on an average 18 ft. wide, worth 28. per cubic fathom for lead ore. The three slopes in back of the 60, east of shaft, are worth about 17. 10s. per cubic fathom—average width 11 ft. In the 45, west of shaft, we are still having nice stones of lead ore at times, but as yet not rich enough to value. The 17 slopes in the back of this level, east and west of shaft, are on the average 25 ft. wide, and are worth for lead ore 28. per cubic fathom. The 30 is now extended 200 yds. west of Sam's shaft, and the present end is under Edwards' shaft; we are still cutting nice spots of lead in the end, and we have now commenced crossing through the lode to prove its value. The two slopes in back of this level, east of shaft, are worth 18. per cubic fathom—average width, 20 ft. The two slopes in the back of the 13, east of shaft, are worth on the average 10. 10s. per cubic fathom. We have commenced to sink a winze below the 45, at a point about 115 fms. west of shaft, in order to ventilate the 60, and when required to transmit stuff to fill up slopes in the back of that level. Surface: We are making good progress with the embankment of the new reservoir. The fixing of the new galley boiler at the lowest engine is complete, including the building for housing the same. We are going ahead as rapidly as possible with the erection of another of the Van new dressing machines, the shed for which has been completed. We are shipping off the 500 tons of blende as fast as we can have trucks. We shall have shipped 200 tons this evening. Our four-weekly lead ore sale takes place to-morrow, upon 500 tons. Little progress has been made on the dressing-floors yesterday or to-day, as we are shut up in frost and snow. I hope the weather will soon change, and until then we must do as best we can.—Wm. WILLIAMS.

PRINCE PATRICK MINE—SPECIAL REPORT.

Dec. 14.—We have experienced an unusually heavy flood lately; we have mastered it well without incurring more than a trifle of extra cost for coal, &c. Our eastern swallow has proved of immense value in this instance alone, for we have drained into it during the last fortnight millions of gallons of water; in fact, there was at times quite a river of water flowing into it, and not a drop returned to any part of the mine. Seeing that the flood was coming so strong, I considered it advisable to suspend the bottom levels on the East lode for awhile, in case any of the water should find its way down and cause us trouble, as the depth is great. As we have abundance of work in dry ground for the men, it will be of advantage to stop the deep working until the spring of next year. The 100 fm. level, driving south west upon the great lode, is much the same in value for lead, and will yield fully 5 tons per fathom for driving, leaving us, therefore, backs, bottoms, and sides of lead ground for stoping whenever required. The north-east slope is richer than ever; I shall not value it in this report, but will write upon it again. The slope in the back of the same is without any change to note; produce same as hitherto, and very regular in its return of ore. The 100 right angle cross-cut, from Campbell's shaft, which is following a strong pipe, is fast approaching the at-grade line of the south lode, and a few fathoms further driving will reach that important object. The 110 fm. level, driving south-west, is producing (tidy dressing stuff, and is in the heart of the finest mineral ground. Most of the 50 tons sold last week is discharged. The mine throughout is in excellent working order.—JOHN LLOYD.

ECHOES FROM THE MINING MARKET.

But little business has been transacted during the past week in our markets, and, consequently, dullness is the predominant feature. The most active is still the colliery share market, which upon the setting in of the cold weather, and consequent upward tendency of coals, presents rather a firm appearance. Tin continues steady, but the demand we alluded to a week or so since seems to have somewhat fallen off. Orders for spring deliveries are now, however, coming on; therefore we may expect to see a revival of the demand before long. Copper, also, signs of the effects of the season, and prices have been rather easier. The fluctuation, however, have been on a very limited scale, and although we may have an uneasy market for the forthcoming week or so, there appears to be nothing to cause any anxiety as to advances when trade revives. The unsatisfactory condition of the iron trade has had a bad effect upon all undertakings connected with the production of this metal, and it does not look as if the accounts that will shortly be made up for the close of the year will exhibit very profitable trading during the past six months. The recurrence of strikes, and the uncertainty caused by such disturbing influences, have militated seriously against profits, and have upset many calculations. If trade revives with the new year we are likely to see a great advance made in the productive power of this country, so far as iron is concerned. There is plenty of virgin ground only requiring better times to be enabled to yield its resources for the benefit of the world. Cornwall as yet, although possessing enormous quantities of the richest descriptions of ore—hematite—has hardly been touched, and there are large tracts of land in the Cleveland (Yorkshire) district that only require facilities as to carriage to become the centres of busy trade. The railway being made through the heart of this district will work wonders in its development.

The determination of the shareholders of the Crenver and Abraham Copper Mines to raise a sum of 20,000l. for the further development of their property shows that their faith in its ultimate success has in no way diminished. They have already expended a very large sum of money, and during the past six months alone have explored nearly 700 fathoms, and have erected a large amount of costly stamping and dressing apparatus. The managers state that they trust before the end of the 20,000l. is reached dividends will have commenced. The mines are, however, very deep, and consequently very costly. North Trekerby, a mine that has long been struggling on under the most adverse circumstances, has had an improvement lately, and it is hoped that from a very promising looking lode, which they have now in the mine, some returns of tin will shortly be made.

Tankerville shares are much stronger in the market. The mine appears to be looking very well, with good promise for the future; the manager states that only patience is required by the shareholders for them to realise all the long-promised success in its entirety. The other mines of the district, excepting Roman Gravel, which, however, does not appear to be looking quite as well as usual, are under a cloud, and most of them require more money to effectually develop their resources.

opportunity of carrying out the policy indicated in their annual report, and should considerably enhance the value of the property. Col. Ludlum expects to make his first clean-up this season about the first week in January. Sweetland Creek, 2½ to 2¾; the agent writes that he is in full course of washing, having abundance of water. A dividend of 2s. per share, payable Dec. 24, has been declared during the week. Birdseye Creek, 2½ to 2¾; the superintendent reports that he is washing at the Neece and West claim, with a full head of water, and will probably clean up at the end of the year.

New Pacific, 5s. to 10s.; the annual meeting was held on Thursday, when the Chairman, who has just returned from America, entered very fully into all particulars relative to his visit to the property. Lander Hill, on which the mine is situated, appears to be full of lodes, some of which are very productive, and more will, no doubt, prove so when sufficient depth has been attained to get out of the influence of the numerous faults with which the upper part of the hill abounds. The company's mines are well placed, and exhibit favourable indications of success, but depth is required. A call of 2s. 6d. per share was made, completing the capital of the company. The report appears in another column.

St. John del Rey, 262½ to 267½; the advices continue satisfactory, and larger returns will be made as the excavation in the lode is extended westward. Sierra Buttes, 2 to 2½. Plumas Eureka, 1½ to 1¾; the clean-up for November of these mines is not equal to expectation, but the cause is believed to be exceptional, as the advices per mail are most encouraging. Independence, 1½ to 2½; the mine is looking better, and the lode is generally more auriferous. Stones of quartz from the shaft assay \$6 per ton.

Cape Copper shares have remained without material change, closing 30½ to 30¾; during October the returns from Ookiep were 860 tons of 31 per cent. ore, and 38 tons from Spectakel of 32 per cent.; 640 tons of ore were sold at public ticketing on Dec. 8, at an average of 17s. 3½d. per unit, realising approximately 15,800£; the last sale of 320 tons, on Nov. 24, realised an average of 17s. 10½d. per unit. Almada and Tiro, ½ to ¾; 16,000 Mexican dollars have been received, and the "ley" of the Mina Grande ore much improved.

Chontales, ½ to ¾; the advices by last mail show a profit on the two months' working of about 1500. There appears to have been a scarcity of labourers for mining purposes, and the 24 heads have been barely supplied with ore, whilst several places in San Sebastian, as well as San Benito, have been idle on account of the scarcity of men. As stated, however, at the last meeting of the company, held in November, measures have been taken on the suggestion of the manager which, when carried out, will, it is believed, considerably lessen the difficulty and enable the whole stamping power of the company to be in constant use. Van, 20 to 22; the usual monthly report will be found in another column. The mine is looking very well. Every appearance indicates that a good lode will be cut in the 90. The four-weekly sale, 500 tons of lead, realised on Thursday 7880£ 5s., being an average of 15s. 15s. 2d. per ton. Van Consols, 2½ to 2¾; the lode in the bottom continues to produce 3 tons of lead per fathom, and the most favourable indications continue to present themselves in the various points opening up. Great West Van, 15s. to 20s.; although these shares are quoted so low the mine is making regular returns of over 30 tons of lead per month; the cross-cut to intersect the main lode of the district is being rapidly pushed forward. Hopes are entertained that a fine course of lead may be laid open, and Capt. T. Hodge, who is about to take the management, has ample capital to develop the mine. Bog, ½ to ¾; the lode in the 175 west, on the Whitestone lode, is now worth 75s. per fathom, with a rich lode gone down in the bottom of the level for 30 fms. in length. The 163 is just coming into the same run of ore ground. Pennerley, 1½ to 1¾; the lode in the back of the 40 is looking well for an improvement. In the 65, at Potter's Pit, the lode is improving. Other parts of the mine without change.

Great Wheel Vor, ½ to ¾; the quarterly general meeting was held on Thursday, and is reported elsewhere. The accounts made up to the day of meeting showed a balance in favour of the company of 720£, besides three engines and spare materials unsold on the mines. The Chairman gave a very lucid statement of the present position of the company, and of the work accomplished since the stoppage of the old mine in March. The engine has gone to work pumping water out of the shaft in the western ground, and already the agents report it drained to the first, or 10 fm. level. It will soon be seen what prospects the shareholders have of a good mine in West Metal, and, seeing that the costs are reduced to under 200£ per month, the speculation is a good one, and well worthy the trial which the committee and shareholders have agreed to give it. Penstruthal, 14s. to 16s.; the accounts from the mine are satisfactory; the main shaft continues sinking through a productive tin lode, which pays for sinking, showing that a profitable mine is being opened up.

New Consols, 2½ to 3; a considerable number of transactions have been reported during the week. Owing to the extensive scale on which this property can be worked, and the belief that it is about to enter on a profit-making career, much attention has been directed to it.

Subjoined are the closing quotations:—

Bog, ½ to ¾; Carn Brea, 5s. to 5½; Devon Great Consols, 2½ to 2¾; East Caradon, 1½ to 1¾; Great Laxey, 10½ to 10¾; Hingston Down, 1 to 1¼; Marke Valley, 1½ to 1¾; Pennerley, 1½ to 1¾; Penstruthal, 14s. to 16s.; Parys Mountain, 6s. to 10s.; Tincroft, 27½ to 28; Tankerville, 8½ to 9½; Van, 20 to 22; Van Consols, 2½ to 2¾; West Tankerville, ¾ to ¾; West Chiverton, 1½ to 2; Wheel Green, 5½ to 6½; West Basset, 7½ to 7¾; Almada and Tiro, ½ to ¾; Birdseye Creek, 2½ to 2¾; Cedar Creek, 1½ to 1¾; Cape Copper, 30½ to 30¾; Chontales, ½ to ¾; Don Pedro, ¾ to ¾; Emma, 1½ to 1¾; Flagstaff, 1½ to 2; Frontino and Bolivia, 6½ to 7; Independence, 1½ to 2; Last Chance, ¾ to 1; Malpas, ½ to ¾; New Quebrada, 2½ to 3; Rio, ¾ to ¾; Richmond, 2½ to 2¾; Solidated, 6½ to 7; St. John del Rey, 267½ to 269½; Sweetland Creek, 2½ to 2¾; South Anzora, ¾ to ¾; Sierra Buttes, 2 to 2½; United Mexican, 2½ to 2¾; Roman Gravel, 12 to 12½; Kapanga, 2 to 2½; West Esgrail Lye, 2 to 2½; Blue Tent, 8 to 8½; Holcombe Valley, 1 to 1¼; New Pacific, 5s. to 10s.

COLLIERIES AND IRONWORKS.—Owing to the still unsettled state of trade, Thorp's Gawber, Chapel House, Bilson and Crump, and Cardiff and Swansea, have all been offered at lower prices, though any important reduction brought in buyers at once. The other shares dealt in have been Silkestone Hall, Altham, Clee Hill, Nant-y-Glo and Blaenau, Whitehaven, Wedgwood, Ebbw Vale, New Sharlston, Mynydd Iron, and some others. United Bituminous, 5s. to 10s.; in a circular recently issued the directors state "that the number of new shares applied for, or promised to be taken, is 710, and the amount promised to be subscribed for debenture bonds 1010£, which, it will be observed, is very far short of the amount which must be subscribed to enable the directors to give their engineer instructions to proceed. Many shareholders holding a large number of shares have promised to subscribe when they know the result of the appeal; but if so many act on the same principle the consequences must be disastrous. It has been clearly demonstrated that an outlay of 4000£ will render the property as profitable as was originally anticipated, but it must be equally evident, and cannot be concealed, that if the amount required is not raised all that has been already spent will be sacrificed and lost, and the past outlay only serve to enrich the future owners. Should the shareholders fail to respond to this last appeal, the directors must endeavour to borrow the amount by means of a mortgage, which will place the loans in the hands of others, and if then unsuccessful the company must inevitably be wound up." While we are of opinion that the shareholders act unwisely in withholding the required assistance, we also think that the affairs and accounts of the company require strict investigation; the falling off in the firebrick department, the first dividend, and the flooding of the Pwll-y-domen Colliery require, we think, looking into. West Cumberland Iron, 11 to 12; Staveley Coal, A, 119 to 120; Silkestone Hall, 30s. to 35s.; Sheepbridge Coal, 53½ to 54½; John Bagnall, 7 to 7½; Original Hartlepool, 9 to 9½; Henry Briggs, 23 to 24; Industrial Coal, 2½ to 3; Boleck Vaughan, 20 to 20½ prem. From a report issued by the liquidators of the Blochairn Iron Company it appears that the wretched concern was much more deeply involved than at first anticipated; the losses up to last August amounted to about 160,000£. The unlucky contributors have had to pay up in full, and the creditors have received a 10s. dividend. Owing to the attitude of several of the creditors, the recent attempts to remove liquidation out of the hands of the directors is not likely to be attended with success. Thorp's Gawber, 14 to 15; Cardiff and Swansea, 3½ to 4; Chapel House, 4 to 4½; Clee Hill, 5s. to 7s. 6d. The report of Earle's Shipbuilding Company, to be presented at the meeting at Hull, recommends a dividend of 17. 8s. per share, less income tax, leaving a small balance to be carried forward. This is equal to 6 per cent. per annum. The directors state that they have entered into contracts with Her Majesty's Government for the hulls and engines of three ships of war, and that the prospect of the company's working advantageously for the coming year is favourable. Of the 154 blast furnaces in the North of England there are 125 in operation, and 12 in course of erection. The make of pig-iron during the month amounted to 171,159 tons, or 600 tons over the same month last year. Most of the rail mills are idle, though Boleck Vaughan has secured an order for 10,000 tons for India. Among the dividends payable during the ensuing few days are Merry and Cunningham, 10 per cent.; Ebbw Vale, 10s. per share; and Cardiff and Swansea, 4s. per share; Glaisdale Whinstone, 2s. to 2½; Central Swedish, 4 to 5; Darlington Iron, 7 to 8; Diamond Fuel, 10s. to 15s.; New Sharlston, 8½ to 9½; Richards and Co., 4½ to 5; at the statutory meeting, held yesterday, the report stated that the coal business had been continued with favourable results, the total quantity sold during the last two months showing a sensible increase on the sales

of the previous two months. An interim dividend at the rate of 10 per cent. was declared, leaving a large balance to be carried forward; the directors are now prepared to issue the remaining shares. Bilson and Crump Meadow, 10d. paid, ¾ to 1½ prem. West Mostyn 12 Per Cent. Preference, 2½ paid, ¾ to ¾ prem.; Mr. Higgin reports favourably of the progress made.

At the Truro Ticketing, on Thursday, 2482 tons of copper ore were sold, realising 11,512£. The particulars of the sale were—Average standard, 112½ 6s.; average produce, 6½; average price per ton 44. 13s.; quantity of fine copper, 163 tons 5 cwt. The following are the particulars of the sales:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
Nov. 19.	3049	1117 19 0	6½	45 8 6	15s. 8d.	478 4 6
Dec. 5.	1514	114 6 0	7½	5 15 0	15 7½	78 1 0
17.	2482	112 6 0	6½	44 13 0	14 1	70 10 6

Compared with the last sale, the decline has been in the standard 6½ 5s., and in the price per ton of ore about 8s. 3d.

It is stated that more than one-half of the shares in the DUBBY SYKE MINING COMPANY (to the formation of which, with a capital of 10,000£, in shares of 1£ each, reference was made in last week's Journal) have been already applied for, and it is confidently believed that the remainder will be quickly subscribed. It was mentioned that the property had the advantage of having the Green Hurth Mine on one side, and the Teedale on the other, and the latest reports from those mines describe them as being richer than ever. The Dubby Syke property is considered to possess a far better water supply than Green Hurth, and Capt. W. Vipond, who has had much experience in the district, states that it cannot fail to be a good venture for all who take an interest in it. The mine has been but little worked, so that the whole of its riches will be available to the shareholders. Capt. Vipond strongly recommends at the very beginning to commence sinking through the whin in the lower part of the sett, and anticipates excellent results therefrom. The prospectus will be found in another column.

The directors of the Cardiff and Swansea Smokeless Steam Coal Company (Limited), at a board meeting held on Tuesday, resolved to pay an interim dividend of 4s. per share, being at the rate of 10 per cent. per annum, and payable at the National Provincial Bank of England.

It is announced that the cheques for the second dividend of 1s. 4d. per share on Grosvin Mining Company shares were posted this (Friday) evening. The Blaen Cwmbach Steam Coal Company have announced that cheques for the first half year's guaranteed interest have been posted this (Friday) evening.

It is announced that the subscription list for the issue of 4000 shares in the Patent Self-Launching Life Raft Company (Limited)—Roper's Patent—will be closed on Saturday, the 19th inst., for London, and on Monday, the 21st inst., for county applications. The laudable purpose of the enterprise has been fully recognised by the press and the public, and the shares are being rapidly subscribed for.

It is stated that Commander John Powles Cheyne, R.N. (director of the Australia Direct Steam Navigation Company, Limited), has consented to join the board of the Patent Self-Launching Life Raft Company (Limited). The shares have been well taken up, and the company has in every way been well received.

We are informed that the shareholders of the Patent Stone Working and Tunnelling Machinery Company (Limited) decided on Tuesday that the company should be wound up voluntarily, and Mr. R. Eaton James was appointed liquidator.

A petition for winding-up the Caerphilly Colliery Company (Limited) has been presented to the Court of Chancery.

CWM DUYFOR COPPER AND SILVER LEAD MINES.—The ordinary general meeting of shareholders was held yesterday at the company's offices in London, when the directors' report was unanimously adopted, and a resolution passed to the effect that it is desirable the unallotted capital should be issued, several shareholders expressing their confidence in the undertaking, and stating their readiness to help towards providing the required amount. The mines, although the workings are only at present at a shallow depth, appear to promise very satisfactory results. A full report of the proceedings at the meeting will be found in another column.

TECMA SILVER MINING COMPANY.—With a view to avoiding any loss of time in putting into effect the resolution passed at the general meeting of shareholders, held on Dec. 11, the board have made arrangements with a gentleman to proceed to Salt Lake City for the purpose of carrying out the lease to be granted to Mr. Gordon. There is every ground for believing that the offer made to the company for the lease of the mines, &c., is bona fide, and that the proposed lessee is reliable and substantial, from whom there will be no difficulty in obtaining, in accordance with the terms of his own offer, ample guarantees for his full performance of the provisions of the lease. The gentleman deputed to proceed to Salt Lake City is a barrister who has large and varied experience in America, and to whom the interests of the company may be safely entrusted. He sailed from England on Thursday, so that a very short time need elapse before the proposed lease is concluded. The petitions in the Court of Chancery stand over for three months, and the company's position may, therefore, now be considered very much more satisfactory than it has been for a long time past.

With this week's Journal a SUPPLEMENTAL SHEET is given, containing—Original Correspondence: Mining on the Pacific Coast; Mining Industries of Cleveland (R. Meade); North Wales Quarrymen's Strike; Richmond Mining Company, and its Nevada Manager (J. D. Power); New Quebrada Company; Mining in Queensland; Australian Tin Mines; Rigi Railway (C. J. Harvey); Successful Lead Mining in Wales, and the "Nascent Copper Process"; Mineralogy, No. II. (H. White); Rock Boring Machinery (McKean and Co.); Legitimate Mining; South Condurow Mine; South Frances Mine Meeting and Report; Hindrance to Successful Mining (E. Skewis); Welsh Lead Mines—the Old Talargoch (T. West); Foreign Mining and Metallurgy—Gold Mining at Great Depths—Foreign Mine Reports—Practical Science, and Vaucluse Archæology—Meetings of the Stephen Roe Diffusive Daylight Reflector, Diamond Fuel, Prussian Mining and Ironworks, Blue Tent Consolidated Gold Mines of California, New Pacific, South Roman Gravel, I. L. L. Gold and Silver, Great Wheel Vor, Gorseid and Celyn Level, West Wheel Gorland, Wheel Kitty (St. Agnes), and New Quebrada Companies.

COAL MINES REGULATION ACT, 1872.

EXAMINATION FOR MANAGERS' CERTIFICATES OF COMPETENCY.
DISTRICT UNDER THE CHARGE OF W. N. ATKINSON, Esq.,
H.M. INSPECTOR OF MINES.

PERSONS desirous of being EXAMINED in this district for MANAGERS' CERTIFICATES OF COMPETENCY, under the above-named Act, should at once communicate with the Secretary to the Board of the above-mentioned District, at the following address.

By order of the Board,
GEO. SOUTHERN, Secretary,
Philippine Buildings, Neville-street, Newcastle.

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Particulars by letter.

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LEAD ORES.				
Date.	Mines.	Tons.	Price per ton.	Purchasers.
Dec. 10—	Maesyrwddw	40	£14 15 0	Walker, Parker, and Co.
—	Coetia Llys	70	16 5 0	ditto
11—	Tan-y-Bwlch	50	15 12 6	Adam Eytton.
—	Bwadrain Consols	30	14 15 0	Nevill, Druce, and Co.
—	Bwlch Consols	10	17 1 6	Weston, Son, and Co.
—	Cyfanedd	7	15 18 0	Nevill, Druce, and Co.
13—	Bronffordy	20	17 5 0	Panther Lead Company.
—	Plynlimmon	40	15 11 0	Sheldon, Bush, and Co.
14—	Great Laxey	100	24 10 0	ditto
15—	Cefn Brwyno	12	14 9 6	Glover and Robinson.
—	Wye Valley	28	13 16 6	George Burr.
16—	Dyllife	60	15 16 0	Panther Lead Company.
17—	Tankerville	12	18 12 0	George Burr.
—	ditto	10	15 11 0	Walker, Parker, and Co.
—	ditto	10	16 0 0	ditto
—	ditto	65	15 15 0	Nevill, Druce, and Co.
—	ditto	32½	15 11 0	ditto
—	ditto	65	15 12 0	Burly Port Company.
—	ditto	65	15 13 0	Glover and Robinson.
—	Grogwinion	50	15 6 0	Burly Port Company.

BLACK TIN.				
Date.	Mines.	Tons c. q. lb.	Price per ton.	Amount.
Dec. 4—	Rosewall Hill	11 12 1 18	£56 10 0	£ 656 11 2
12—	W. Godolphin	7 18 0 2	56 5 0	444 8 6
16—	Penhalls	8 9 0 25	58 2 6	491 16 0

AUSTRALIAN TIN ORE SOLD IN LONDON on Dec. 15.
Qty. Price. Purchasers.
cwt. £ s. d. cwt. £ s. d.
11... 55 15 0... Bolitho and Sons.
17... 55 2 6... R. R. Michell and Co.
30... 59 12 6... Ditto.

EACH COMPANY'S PURCHASE.
Messrs. Bolitho and Sons, 11 cwt.; R. R. Michell and Co., 2 tons 7 cwt.; and the Tamar Smelting Company, 2 tons 19 cwt.—Total: 5 tons 17 cwt.

PERUVIAN TIN ORE SOLD IN LIVERPOOL on Dec. 16.
Messrs. R. R. Michell and Co., 2½ tons at 85s., and 2½ tons at 45s.—Total: 5 tons.

SALES OF COPPER ORES.
Sampled Dec. 2, and sold at the Royal Hotel, Truro, Dec. 17.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
South Caradon	125	£20 16 0	Wheal Crebor	55	£23 17 6
ditto	97	6 15 0	ditto	40	10 16 6
ditto	96	4 8 6	West Maria & Portescue	85	3 11 6
ditto	80	7 14 0	ditto	65	8 13 6
ditto	62	7 12 6	East Caradon	45	5 16 6
ditto	47	8 13 0	ditto	45	4 16 6
ditto	33	6 0 6	ditto	30	15 13 6
Marke Valley	84	£14 6	Gawton	75	2 4 6
ditto	83	3 12 0	ditto	44	0 10 0
ditto	65	3 10 6	ditto	8	7 17 0
ditto	65	5 0 0	Prince of Wales	55	4 12 0
ditto	60	0 5 0	ditto	61	4 19 0
ditto	38	1 1 0	Wheal Russell	58	3 7 0
ditto	32	8 10 6	ditto	47	3 2 0
Hingston Down	100	2 19 6	Bedford United	54	3 14 6
ditto	86	2 10 0	ditto	30	3 17 0
ditto	62	2 18 0	Phoenix	85	6 17 0
Glasgow Caradon	80	7 16 0	Wheal Friendship	21	9 15 6
ditto	77	4 15 6	ditto	15	3 8 6
ditto	53	4 19 6	Duchy Great Consols	38	2 1 0
ditto	38	3 10 6	Belstone	13	8 17 6
Wheal Crebor	60	3 12 6	New Crowndale	10	2 11 0

TOTAL PRODUCE.
South Caradon ... 540 ... £2873 13 6
Marke Valley ... 422 ... 1494 15 6
Hingston Down ... 260 ... 702 5 0
Glasgow Caradon ... 245 ... 1378 14 6
Wheal Crebor ... 155 ... 863 12 6
West Maria, &c. ... 150 ... 867 15 0
East Caradon ... 130 ... 1004 15 0
Gawton ... 127 ... 251 13 6
Average standard ... £112 6 0
Average price per ton ... £4 13 0
Quantity of ore ... 2482
Amount of money ... £11,512 0
Quantity of fine copper ... 163 tons 5 cwt.
Amount of money ... £11,512 0
LAST SALE.—Average standard ... £114 6 0
Average price per ton ... £4 13 0
Quantity of ore ... 2482
Amount of money ... £11,512 0
Quantity of fine copper ... 163 tons 5 cwt.
Amount of money ... £11,512 0

Notices to Correspondents.

* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt; it then forms an accumulating useful work of reference.

BIDDER'S LAMP.—In answer to "V. and D.," in the Journal of Dec. 5, a Bidder's lamp may be obtained from the Harrogate Collieries, Stoke-on-Trent, where they are exclusively used (about 1500).—G. W. W.

BANTRY BAY BARYTES QUARRY COMPANY.—The shareholders would, doubtless, be glad to know how this concern is going on. This year's report is much overdue. How is it that the managers are unable to sell their barytes in the same easy way that other barytes makers are able to do? Is the property worked in such a way as to interest only a few instead of the whole body of proprietors? Perhaps the officials will vouchsafe a reply in your next Journal.—T. R. O.

CERTIFICATES OF COMPETENCY.—"J. A." (Barnsley).—There is nothing to prevent a working collier obtaining a certificate of competency; indeed it is from the ranks of the working colliers that the best and most reliable class of future colliery managers may be expected. Your idea of appointing a staff of teachers to give lessons in the subjects necessary for the scientific portion of the manager's examination is excellent, and would probably receive the support of the delegates. It would probably require six teachers, and men worth appointing could not be obtained below the stipend you mention. The question is whether the 90 men at 10s. each could be got to attend the classes, so as to make them self-supporting, provided the use of the Miners' Hall were granted free. An additional 1000, at least would have to be provided for secretary, gas, printing, and contingencies, so that 1000l. per annum would have to be provided by fees or otherwise. Suggestions as to organisation, &c., forwarded to the Mining Journal will receive attention, but it would, obviously, be preferable for some energetic man connected with the district, as delegate for example, to frame a formal project.

EDUCATION OF YORKSHIRE COLLIERS.—"R. K." (Barnsley).—See replies to other correspondents on the same subject in this day's Journal.

RAILWAY WAGON.—"F. M." (Terns, Paris).—Your letter has been received, but the parcel promised by railway has not come to hand. At the present time it is difficult to find capitalists willing to embark in patent matters, especially when, no provisional specification having been secured, the exact details of the invention cannot be explained.

OPERATIVE MINERS' SCIENCE SCHOOLS.—"F. N." (Wombwell).—A similar suggestion has been received from Barnsley; but, as in the case of "F. N.," the real name of the writer has been omitted. This is the more regrettable, as it may enable others to appropriate the idea. It is quite true that "Yorkshiremen," being practical colliers, and possessing the knowledge proposed, would command positions as managers at high salaries wherever coal is wrought, but whether the Miners' Association would vote 300l. a year on condition of the coalowners voting 300l., or, as an alternative, guaranteeing to pay the difference between "teachers' salaries and expenses limited to 1000l. per annum," and the "amount received for fees, including the 300l. voted by the Miners' Association," could only be determined after the matter has been further discussed. The carrying out of the project would be of as much advantage to the coalowners as to the colliers, and a guaranteed contribution from the owners payable only when the school would otherwise fall into debt could not be objected to "if reasonable conditions were submitted by the colliers, so that there would be an assurance that the classes would be attended."

KALOSIC GAS.—"J. F." (Dudley).—A letter addressed to the patentee, care of this office, will be forwarded.

DOUBTFUL MINERALS.—"T. A. R." (Liverpool).—As to preferring Dana's or Maskelyne's nomenclature, it is, of course, a mere matter of opinion. It would be unjustifiable to "eliminate such old-fashioned names as lead ore, blende, black tin, and copper pyrites, and substitute Dana's galena, sphalerite, cassiterite, and chalcocite," because the terms are not synonymous. The materials purchased by the smelters are not such as Dana would designate by the names "T. A. R." mentions, any more than table salt is halite, or than tough cake is native copper. "T. A. R." must not forget the good old logical maxim, that "he who proves too much proves nothing."

MECHANISM IN MINING.—"T. R." (Leith).—We shall be glad to receive the proposed communication. Such matters are always acceptable.

THE SUPPLEMENTARY SHEET.—We have received occasional complaints, and of late a good many, that the Journal is delivered by country booksellers without the Supplement. Subscribers would oblige us by demanding that the paper should be handed to them complete, as every Journal is accompanied by the Supplement when it leaves our office, and the fault of omission must rest with the country bookseller or their London agent.

ABERDAUNANT—LIANWERT.—"H. M." (Horsham) should write to Messrs. Eadon and Co., 85, Gracechurch-street, London.

SHARE DEALING.—We never interfere in the sale or purchase of shares; neither do we recommend any particular mine for investment or speculation, or broker through whom business should be transacted. The addresses of most of the latter appear in our advertising columns.

Received.—"H. D. H."—"G. R."—"R. J. Crickmer"—T. Nester (East Saginaw, Mich.).—"W. E. P."—"H. M."—"C. P."—"Nemo"—"Shareholder" (West Chiverton).—"Shareholder" (Great Wheel Vor).—"S. D. D."

* Friday next being CHRISTMAS DAY the Mining Journal will be printed at midnight on Thursday, instead of midnight on Friday, as usual; it is, therefore, requested that all letters, articles, and mine reports intended for insertion next week may be forwarded so as to reach our office by Wednesday evening at latest. No market reports or advertisements can be inserted unless received before 7 p.m. on Thursday.

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, DECEMBER 19, 1874.

ECONOMISING OF FUEL IN IRON SMELTING.

In the present depressed state of the iron trade in many districts, and the foreign competition which our manufacturers have to meet, not only in distant but even in our own markets, nothing appears to be of more importance than the economising of fuel in the production of pig and every description of manufactured iron and steel that a vast saving can be effected in the consumption of fuel in our blast-furnaces is conceded by all our leading ironmasters, and although considerable progress has been made in that direction during the last two or three years, much more remains to be done before anything like the full value of the coal used in smelting is realised. The North of England makers of pig have set a very good example to those in other parts of the kingdom, for they have spared no expense in the erection of their furnaces and the adoption of scientific appliances for minimising the quantity of coal required to produce a ton of iron. That they have been successful in their efforts we are assured by a very high authority on the subject, Mr. I. LOTHIAN BELL, who stated some time since that a reduction had been effected in the amount of coal required to produce a ton of pig of from 70 cwt. to 45 or 46 cwt. But to show that the lowest point is far from reached as yet, Mr. BELL says that out of the 20,000,000 tons of coal used annually in smelting the ore it was possible to economise 2,000,000 or 3,000,000 tons. Were this accomplished, it would place our ironmasters in a position which would enable them to maintain their old supremacy, for so much coal saved would soon bring down the price of it to something like what it was three or four years ago, and thus a double advantage would be obtained, and in which the general public would be considerable gainers. With regard to manufactured iron and steel there is very little doubt but what a large saving could be effected from the 20,000,000 tons of coal that are annually consumed in the converting of the pig into the various forms for which it is made suitable for every description of work, from the heaviest castings to the smallest springs.

With regard to many of the old-fashioned open-topped furnaces, a vast quantity of fuel is wasted by them. Many of them are to be found in localities many miles distant from the nearest coal field. On the other hand, however, we find that in districts where coal is plentiful the gases are utilised for heating the boilers, &c., and at them, of course, iron can be made at a much less cost than in the former. It is, then, to the interest of the makers of pig to avail themselves of all improvements by which it can be produced at the smallest possible expenditure of coal, for it is only by so doing that they can expect to maintain the supremacy they have so long held in nearly all the markets of the world, but which of late has been so seriously, and to some extent successfully, attacked. But looking at the returns of Mr. HUNT with respect to the coal consumed in the making of pig-iron throughout the kingdom for 1873, and assuming, as we do, that they are as correct as it is possible for figures so obtained to be, then we find that some little progress has been made in the direction we have pointed out. In several districts the coal consumed in making a ton of pig-iron has considerably decreased, as compared with the quantities given for 1872. Reducing the tonnage into hundredweights, and leaving out fractional parts, the following figures show, in round numbers, the amount of coal

given for producing 1 ton of pig-iron in the different districts for the years 1872 and 1873:—

	1872.	1873.
Coal per ton of pig.	Tons	Tons
Northumberland	2 14	2 6
Durham	2 7	2 6
Yorkshire, North	2 6	2 6
ditto West	3 0	3 5
Derbyshire	2 18	2 18
Lancashire	1 15	2 2
Cumberland	2 9	2 7
Shropshire	3 0	3 0
Staffordshire, North	2 19	2 19
Northamptonshire	3 2	2 19
Lincolnshire	2 18	2 18
Gloucestershire	2 17	3 0
Somerset and Wiltshire	2 15	2 14
North Wales—Denbigh	2 15	3 3
ditto Flint	3 9	2 2
So. Wales—Glamorgan, Anthracite	2 16	2 10
ditto Bituminous	3 11	2 8
Monmouthshire	2 8	2 8
Scotland	2 19	2 14

The returns from which the above figures are deduced do not appear all that could be desired, and it is to be hoped that in future years they will be more exhaustive and reliable. As it is the returns appear to have been only partially given, so that Mr. HUNT has had to supplement them. From these we give, however, it will be apparent that the North of England and the Lancashire hematite districts show to very great advantage as compared with other districts, as also does Cumberland, where the red hematite ore is also raised. In the interests of our ironmasters, as well as for the maintenance of our manufacturing prestige, we trust that the next returns will show to still greater advantage than the last.

WEST MOSTYN COAL AND IRON COMPANY.

The sinking operations at the above colliery have been temporarily suspended, owing to the fact that the pressure of the water acting on the sand in the bottom of the shaft has caused it to become so quick that it was impossible to make any progress therein. A metal cylinder, 1½ in. thick, has been cast, consisting of 11 segments to the circle of the shaft, which is 15 ft. inside diameter. It is believed from borings made recently that this cylinder will, by its own gravity, and the pressure of the water upon the sand, run down upon the marl. It will be suspended from bearers at the surface by means of eight tie rods, with screws to prevent its running unevenly, or, in the event of its meeting with boulders or other obstruction, to prevent the cylinder from canting. In the event of any obstacle occurring which would prevent the cylinder bedding itself in the marl, and assuming that it would be impossible to get to such obstruction to remove it, then it is intended to apply pneumatic pressure to force back the water, as in the Bagillt winning at the Bettisfield Colliery.

Works of the description now in operation at West Mostyn are necessarily, from their nature, of a slow and tedious character, but we do not opine that the difficulties there encountered are greater than is usual in such undertakings, and we see nothing there but what time and energy will overcome.

BRITISH ENTERPRISE IN PRUSSIA.

PREUSSISCHE BERGWERKS-UND HUTTEN-ACTIEN-GESELLSCHAFT.

Although the iron trade in Prussia has for some time past been seriously depressed, and the realisation of profits has temporarily become impracticable, it cannot be doubted that the Prussian Mining and Ironworks Company have been laying the foundation of an enterprise which in future years will hold a prominent position amongst the great industrial undertakings of Prussia, and prove of far greater permanent advantage to her than the military supremacy she at present enjoys with regard to the great family of German States, for the company's operations will assist in rendering her independent of foreigners for her supply of coal and iron, and thus elevate her in the scale of manufacturing countries. The Prussian Mining and Ironworks Company has already expended about 1,000,000l. sterling in the acquirement and development of the collieries, ironworks, and iron mines, and although as yet the shareholders have received but very inadequate interest upon the outlay, estimating it on the purely commercial basis of percentage per annum, they have acquired property which, when completely developed, will yield handsome returns for generations. To permit of this development at the earliest possible period it was unanimously resolved, at the recent meeting in Düsseldorf, upon the recommendation of the Aufsichtsrath, to create 15,000 new shares, one-half of such additional share capital being held at disposal up to June 1877, for the purpose of being exchanged for an equal amount of partial obligations already created, but only now about to be offered to the public, upon certain conditions, whilst the remaining half will provide ultimately the requisite funds for completing the development of the valuable properties which the company possess. By this arrangement the enterprise will be placed upon a thoroughly sound financial basis, and the property will be brought into the best possible condition for the realisation of profits.

That purchases of new properties have been too freely made, considering the amount of funds at the disposal of the executive, may, perhaps, be true; yet the failure to place so large a proportion as three-fourths of the second emission of partial obligations in March, 1873, may have had much to do with the company's embarrassment, and it must not be forgotten that a period of great depression has been passed through by the iron manufacturers of Prussia, such, indeed, as would suffice to upset the most careful calculations in anticipation that could have been made. But the present slight check in the company's prosperity may not be devoid of ultimate advantage to the shareholders generally if it teach the executive to be less ready to make purchases, and even more energetic than they have been in opening out the fine properties already under their control. They have mines producing iron ores of all necessary qualities, and an abundant supply of fuel; the pits and works being in all cases admirably situated and in good working order. The capital, 1,245,000l., with the new creation of shares, is quite as large as capitalists can be expected, as men of business, to embark in a single venture; but it seems absolutely desirable that the additional capital now asked for should be promptly supplied, and it may be hoped that they will enjoy a long succession of handsome dividends as a fair reward for their very considerate patience in awaiting fairly large profits, and their unbounded confidence in the management, which has hitherto shown such praiseworthy energy.

Looking at the summary of the company's property, it will be found to comprise three extensive collieries, two well-situated ironworks, and a dozen valuable iron mines in various localities, so that if the present property cannot be made remunerative it is unlikely that the position of affairs would be improved by enlarging it. The collieries are situated in the centre of the Westphalian coal basin, west and north of the town of Dortmund, and consist of the Erin Colliery, about 2500 English acres in extent; the Hansa, 2000 acres; and the Zollern, 3000 acres; making 7500 English acres in all of coal field, forming one connected whole, the surface of which is traversed by the network of the Cologne and Minden, the Berg and Mark, and the Rhenish Railways, as well as by the line of the projected Emscher Ship Canal. The concessions of the whole of these coal fields are held in perpetuity, and entirely free of rent, the only outlay chargeable being a royalty of 2 per cent., *ad valorem*, upon the coal produced. The ironworks comprise the Vulcan blast-furnace works, near Duisburg, on the Rhine, at the mouth of the Rhine and Ruhr Canal, and on the Berg and Mark and Rhenish Railways; and the Teutonia blast-furnace work, with its own mines of oolitic and other iron ores on the line of the Westphalian Railway, near Willebadessen. The iron mines consist of the Briloner Eisenberg, near Olsberg, yielding calcareous red hematite; the Vogelsberg and Hermann, near Giessen, producing brown iron ore; the Odenwald, near Darmstadt, mangiferous brown iron ore; the Nassau district mines, brown iron ore and mangiferous brown iron ore; the Neuwied district mines, spathose iron ore; the Westerwald district mines, red hematite (eisenglanz) and brown iron ore; Alter Flussberg, spathose iron ore (of this one-fifth only belongs to the company); and several other extensive concessions, not as yet developed, but which may no doubt turn out to be of value. The iron conces-

sions are held in perpetuity, free from any rent whatever, and the winning of iron ore is not subject to any royalty in Prussia. From the inventories of the plant, &c., at the various collieries and works, there can be no doubt that they have been laid out with a view to permanency, and the further outlay in the shape of additional pumping power, and such like, should make the works as complete as any in Europe. It might be well for shareholders to require the assurance of the executive that there shall be no further outlay for the purchase of lands and mineral properties, and this assurance would no doubt be very readily given, as the raising of the new capital is essential to the existence of the undertaking, and the reception which the March, 1873, emission of partial obligations obtained is conclusive evidence that the shareholders generally have gone nearly as far as they are inclined to.

MINES REGULATION ACT—APPOINTMENT OF A COLLIERY INSPECTOR.

The Civil Service Commission has announced, as will be seen from an advertisement in another column, that in the ensuing month an open competition will be held for the office of Inspector of Coal Mines, and from the circumstance that the primary condition is that candidates must have been employed within the last five years for at least two years underground in a coal mine should suffice to remove all fear of any but a thoroughly competent man being appointed, whilst to ensure the exclusion of uneducated men it is ordered that the candidate must show competency in writing, spelling, arithmetic, and composition, and that he must have a theoretical as well as a practical acquaintance with coal mines and mining, and if he have a knowledge of metalliferous mines it will be so much the more in his favour. The judgment displayed in framing these conditions of candidature can scarcely be over estimated, for it will ensure the appointment of men specially prepared for the office, and the exclusion both of illiterate practical colliers and of mere school-taught aspirants; indeed, the conditions appear in every way calculated to place the future inspectorship of mines in the hands of young men who, having been practically employed for a couple of years as underground overman, or in some other similar capacity underground, have the perseverance and intelligence to get through their three years' course without degrading at the Royal School of Mines in London, Royal College of Science in Dublin, or in some other equally good science school as may be most convenient to them. A better class of men than this for Government Inspectors can scarcely be desired.

The appointment is one well worthy of competing for, since the salary of the assistant inspector, which is the post the candidate will first occupy, is 3000l. per annum, with liberal allowances for expenses, and he has the prospect before him of rising to be the chief Inspector of a district, with a maximum salary of 8000l. per annum, exclusive of expenses. The gaining of the appointment involves the discontinuance of all private business connected with mining, for an Inspector, whether principal or assistant, must devote his whole time to his duties, and he is expressly prohibited practising, acting, or being the partner of anyone who practises or acts, as a land agent or mining engineer or manager, viewer, agent, or manager of mines, or to be otherwise employed in or about any mine. The age of the candidate being limited to from 25 to 35 ensures the selection of a man of at least some experience, and still not too old to expect an enjoyment of his full energies for some years after his appointment. The conditions of the candidature are such as will certainly give great satisfaction to colliers, whilst they appear so fair and reasonable that those of any class cannot reasonably object to them.

BLASTING EXPERIMENTS.

Some interesting experiments with cotton gunpowder as a blasting agent were performed last week at the celebrated quarry of Craigleith, near Edinburgh, for the purpose of showing the superiority of the material manufactured by the Patent Cotton Gunpowder Company (Limited) over ordinary gunpowder and dynamite in blasting, rock cutting, and excavations generally. The experiments, which were superintended by Mr. Ramsay L'Amy, of Netherbyres, the chairman of the company, were conducted in the presence of the managers of the quarry and a number of other spectators. The explosive material used on the occasion was that termed "Brand B.M., No. 2," and its chief advantages are said to be immunity from the danger of explosion in transit and in storage, absence of smoke and of noxious fumes, fitness for service at all seasons and in all climates, and excellence of work. The powder is supplied ready for use in weighed charges. If set fire to it will only deflagrate, and will not explode unless very strongly confined. It is also desirable to employ the material in charges, in order to avoid spilling and wasting the powder.

As with dynamite, this cotton gunpowder is exploded by the use of detonators. Each charge has inserted into it one of these detonators, which are copper caps, about 1 in. long, and are filled with at least ½ in. of fulminating powder. The results of the experiments at Craigleith Quarry may be said to have maintained the character and extended the reputation of the material. After some preliminary arrangements, several small cartridges, containing a total quantity of 40 ozs. of powder, were placed in a bore-hole 11 ft. deep, and about 2 in. in diameter. The explosion was comparatively noiseless, and it was found that although the rock which it was intended to blast had not been completely removed, yet it had been cut so as to render quarrying very easy, as well as profitable. The important fact in connection with this experiment was that the 40 ozs. of material did as much work as 192 ozs. of ordinary gunpowder, and in a manner much more acceptable to quarrymen. The next experiment was almost a failure, owing to the cartridge having stuck in the middle of the bore-hole, and the consequence was that the charge went off like a cannon, and did no work.

To show the relative value of gunpowder and patent cotton gunpowder in cutting the rock, a charge of 30 lbs. of gunpowder was placed in a bore-hole 12 ft. deep and 4½ in. in diameter. The explosion was terrific, pieces of rock being sent hundreds of yards into the air, and the solid block in which the bore-hole had been made being completely shattered at the surface but scarcely injured 12 feet down. In respect of good work the quarrymen had no hesitation in preferring the patent cotton powder to ordinary gunpowder; and, seeing that its force in ordinary cases is four times greater than that of gunpowder, they could scarcely withhold superiority in respect of power.

In order to demonstrate the safety, and even impunity, with which the powder may be handled Mr. L'Amy divided a cartridge and set fire to it, when it simply burned like an ordinary torch.

Prof. Atfield has lately performed some experiments with his new powder. He says that a mass of iron weighing half a ton was let fall, from a height of 15 ft., on to a box containing 10 or 12 lbs. of powder. There was no ignition or explosion. An unusually well-made powder-barrel, strongly hooped and headed, containing between 30 and 40 lbs. of the powder, in the form of cartridges of various sizes, was placed over some faggots saturated with tar, and a large bonfire kindled. In four minutes the cartridges ignited, and merely burned for some 30 or 40 seconds. Every cartridge was entirely consumed without any explosion whatever. A cartridge was placed in an open box containing 2 lbs. of common powder, and the latter fired by a fuze; the cartridge was blown some yards, but not exploded. The cartridge was afterwards fired by the usual means.

GEOLOGICAL LITERATURE.—It has been decided to publish a yearly "Record of Geological Literature," in order that the many workers in the various branches of geological science may know what their brethren all over the world are doing, by means of an abstract of the year's work, which will also be an index to the sources where details may be found. Mr. W. Whitaker, of the Geological Survey, is the Editor, and is assisted by a large and able staff of sub-editors and contributors, amongst whom we notice (as known to our mining friends) Mr. D. Forbes and Dr. Foster (H.M. Inspector of Mines for the West of England), besides many officers of the Geo-

logical Survey. A separate section will be devoted to Mining and Applied Geology. The first volume, which will notice books, papers, maps, &c., published in 1874, will be issued in the summer of 1875.

THE PATENT LAWS.—The reply of the Lord Chancellor to the deputation which on Monday last urged upon him the need for an amendment of the Patent Laws appears to foreshadow some early effort of legislation in this direction. The need for a revision of the existing system has been long felt, and, indeed, some valuable work towards this end was done by the late Government. In pursuance of a request from Lord Granville, reports upon the Patent Laws of nearly every State in Europe and America were obtained from the British Embassies. These were published about eighteen months ago. Some of them are exceedingly full and clear, especially that from the United States, where the Patent Laws appear to work in a very satisfactory manner to the industrial community. It was this system which Sir Antonio Brady and the deputation who accompanied him recommended to Lord Cairns as presenting an example to be followed in any amendment of our own laws. The leading points in which the American system differs from the English are its cheapness, its provision for a preliminary investigation, so that no patents may be granted for inventions which are not new, its consequent guarantee of novelty and of ascertained proprietary right on the part of the holder of a patent, its more liberal allowance of time for the perfecting of an invention, its freedom from technical and legal difficulties, and the early and cheap distribution of details and illustrations of new inventions as soon as the patents are granted.

EXPORTS OF RAILWAY IRON.—The exports of railway iron from the United Kingdom in November exhibited great depression, having amounted to only 47,804 tons, as compared with 70,781 tons in Nov., 1873, and 81,792 tons in November, 1872. In November, 1872, the United States ranked first as consumers of our railway iron; in November, 1874, they only stood eighth on the list, having taken the comparatively insignificant quantity of 1819 tons. In the 11 months ending Nov. 30 this year our exports of railway iron only amounted to 753,341 tons, as compared with 737,250 tons in the corresponding period of 1873, and 881,610 tons in the corresponding period of 1872. It seems very doubtful whether when the figures for the whole of 1874 are made up they will not present a decline as compared with those for the whole of 1873. The decline in the consumption of our railway iron in the United States has assumed very alarming proportions; thus we only sent the Americans 93,445 tons in the first 11 months of this year, while in the corresponding period of 1873 we forwarded to the United States 177,955 tons, and in the corresponding period of 1872, 441,074 tons. The Russian, Indian, and Australian demand has been encouraging this year. The value of the railway iron exported to Nov. 30 this year was 9,295,352*l.*, as compared with 9,748,283*l.* in the corresponding period of 1873, and 9,428,082*l.* in the corresponding period of 1872.

REPORT FROM CORNWALL.

Dec. 17.—We are still on the waiting order, waiting for better times to turn up, and hoping that they are not very far distant. There can be very little of importance to record, in the ordinary course of events, between this and the new year.

The rating of mines has dropped again. A meeting of the various rating authorities of the county has been held at St. Austell this week, when a rather curious and knotty point was introduced. Mines are, under the Rating Bill, to be rated on the basis of the dues. This is clear enough; but how if there are none? What is to be done in the cases—by no means uncommon—in which a struggling mine is aided by the lord either giving up the dues altogether for a time or reducing them below the amount specified in the lease? If the rates are only leviable upon dues actually paid, in that case they will be levied on a greatly lessened amount; in the other they will not be levied at all. So the point to be settled is whether the dues as stated in the lease are to be the basis of assessment, or the amounts which actually pass to the lord. In the former case, of course, the assessment committee would require to be furnished with a statement of the produce of the mine to make the calculation for themselves. Under the old law such mines as paid dues in kind (and so far as dues paid in kind are concerned the old law remains in force) were only rated on dues actually paid; and the sense of the meeting at St. Austell appeared to be in this direction. No definite decision was come to, and the matter was left entirely in the discretion of the various assessment authorities, without any formal expression of opinion from the aggregate body; but most of the speakers evidently thought that where a mine could not pay dues it was hardly fair to call upon it to pay rates. Of course, any controversy as to the power of the lords to remit dues in such a way that the remission shall avoid the rates could be very easily settled by the granting of a fresh lease, with conditions to meet the altered state of the case.

We have had another, though not, all things considered, a very serious, illustration of the need that more attention should be paid to the condition of adits than is frequently done—the bursting of an adit at Wheal Margaret, Lelant. The timbers were unsound and rotten, hence the collapse. On Friday last Capt. Pope, of Tincroft, discovered that something was wrong, but the men continued to work on Saturday and Monday. On the latter day, however, the water began to rise, and the men in the lower level had to cease from work. The water, of course, flooded the lower part of the mine, and also interfered with two other mines adjoining—Wheal Kitty and Wheal Mary. All three mines produce tin, and employ a large number of men, women, and children. Of course, an accident which would throw all these persons out of employment would have been a most calamitous occurrence. The water on Monday night was said to be 50 fathoms deep in Wheal Margaret, and the other two mines were also affected; Wheal Mary was the deepest of the three. Forty men in Wheal Mary had to leave their work, and there were 20 or 30 from the other mines also thrown out of employment for the time. Men were set to work to clear out the water, and shafts were sunk over the "choke." As the result of untiring efforts in this direction, the water soon began to decrease. Such an accident as this suggests the advisability of greater precaution being taken in future, so that the bursting of these adits may be made as remote contingencies as possible. We recollect what the effects were of a similar occurrence on Dolcoath.

The St. Ives election is still in progress, and the two candidates—Mr. Praed, the Conservative, and Sir F. Lyett, the Liberal—are working very hard. It will be over just before Christmas. There is very little to interest mining men in the affair, but the disputes between the drift fishermen and the seine owners have come very prominently to the front.

TRADE OF THE TYNE AND WEAR.

Dec. 17.—The trade of these ports has been much obstructed during the past week by a succession of dreadful storms in the North Sea. There is a good demand for house, gas, and best steam coal. The demand for best coke is also tolerably good, as pig-iron makers are still comparatively busy. The coalmasters in Northumberland have again made a demand for a reduction of 10 per cent. in the wages of the miners, alleging as a reason that coals have fallen and are still falling in value. A meeting has been held, when the Coal Masters' Committee met a deputation of the miners, headed by Mr. Burt, M.P. The miners stoutly oppose any further reduction at present, and after the question was discussed the masters' committee agreed to adjourn for a month. In the course of the discussion it was mentioned by the masters' committee that while the best steam coal is still sold at comparatively high prices small and manufacturing coals are sold at a very low price, and the miners were asked if they would agree to a distinction being made between works producing first-class steam coal and the works producing manufacturing coal. The reason for proposing such a distinction are obvious, for while it is obvious that the works producing the best-class coal may earn profits with the present rate of wages, it is scarcely possible for those producing inferior coal to do so.

There is, however, little doubt that the state of the trade will ultimately require that the proposed reduction of 10 per cent. will have to be made all round. In Durham the coal masters and miners are in a much worse position than in Northumberland. Short time continues at many of the large works, and as the average price of coal has fallen nearly to the level of April, 1872, a further reduction of 10 per cent. will be proposed shortly by the Durham Coal Masters' Association. In West Cumberland the coal masters gave notice a short time ago for a general reduction of 10 per cent. on all miners' wages, but the men have not accepted this reduction, and have turned out on strike. This strike extends from Aspatria in the North to Whitehaven in the South, and looking at the state of the general coal trade at present it is almost certain that it must end disastrously for the men.

The Iron Trade continues very quiet in most quarters; there is, however, still a good make of pig-iron, as the demand for Cleveland pig appears to assure a good business in that material, whatever may become of the manufactured iron trade. The rail trade generally is in a very torpid state, but a good order for 10,000 tons of rails has been secured by Bolckow and Vaughan, on the Tees, lately. On Tuesday, at Middlesbrough, there was a very meagre attendance, and very little business was done. The prices of No. 3, Cleveland pig, was 62*s.* per ton, but for delivery next year 2*s.* per ton less was accepted. In the finished iron trade there is no improvement; there is very little enquiry for any kind of iron. A large number of men are out of work on Teesside in consequence of the rail trade having become so stagnant. Shipbuilders, engineers, founders, &c., are moderately brisk.

Some further experiments of a most interesting character were made yesterday, and are expected to be continued this week, at the Mining and Chemical Colleges, in Newcastle, with safety-lamps, with a view to determine the conditions under which those lamps will explode the external atmosphere when placed in an explosive mixture, by concussion from the firing of shots, &c. We expect to give a full account of these experiments in next week's Journal.

REPORT FROM SCOTLAND.

Dec. 16.—The Pig-Iron Market continued lifeless all last week, and only a few transactions took place in warrants for 84*s.* 3*d.* to 85*s.*, closing sellers at the latter price on Friday afternoon. On Monday the tone was firmer, a fair business being done up to 85*s.* 6*d.* cash. Yesterday the market was much quieter, only one transaction reported, at 84*s.* 9*d.* To-day a fair business was done at 84*s.* and 84*s.* 1*d.* cash, closing buyers at latter price. The price of makers' iron remains steady:—

G. m. b. at Glasgow (deliverable alongside)	No. 1.	No. 3.
Gairtherridge ditto	85 <i>s.</i> 0 <i>d.</i>	85 <i>s.</i> 0 <i>d.</i>
Coltness ditto	85 <i>s.</i> 0	84 <i>s.</i> 0
Summerlee ditto	85 <i>s.</i> 0	81 <i>s.</i> 0
Carnarvon ditto	82 <i>s.</i> 0	82 <i>s.</i> 0
Monkland ditto	87 <i>s.</i> 0	82 <i>s.</i> 0
Clyde ditto	87 <i>s.</i> 0	81 <i>s.</i> 0
Govan, at Broomielaw ditto	88 <i>s.</i> 0	81 <i>s.</i> 0
Langloan, at Port Dundas ditto	100 <i>s.</i> 0	83 <i>s.</i> 0
Calder ditto	100 <i>s.</i> 0	83 <i>s.</i> 0
Glenarnock, at Ardrossan ditto	94 <i>s.</i> 0	83 <i>s.</i> 0
Eglington ditto	85 <i>s.</i> 6	80 <i>s.</i> 6
Dalmellington ditto	86 <i>s.</i> 0	—
Carron, at Grangemouth, selected, ditto	96 <i>s.</i> 0	—
Shotts, at Leith ditto	97 <i>s.</i> 6	84 <i>s.</i> 0
Kinnell, at Boness ditto	90 <i>s.</i> 0	78 <i>s.</i> 6
Bar iron	410 <i>s.</i> 0	—
Nail rods	10 <i>s.</i> 0	—

Week ending Dec. 13, 1873.....Tons 11,215
Week ending Dec. 12, 1874.....9,372

Decrease.....1,843
Total decrease since Dec. 25, 1873.....153,656

Imports of Middlesbrough pig-iron into Grangemouth:—
For the week ending Dec. 13, 1873.....Tons 3,220
For the week ending Dec. 12, 1874.....2,300

Decrease.....920
Total increase for 1874.....48,413

The make of iron has increased in store till it now reaches about 30,000 tons. Makers' iron is very steady in price for No. 1, but No. 3 is scarce and dear in proportion. This is caused in consequence of a greater production of No. 1 taking place than usually occurs. The furnaces now number 121, and a good portion of the make is being stocked. The puddling furnaces at the malleable works—of which not more than half their number are lighted—are engaged all the week, but if the aggregate were at work not more than three days would be run in the week. The shipments embrace small orders of bars and rods, tubing and piping, galvanised hollow ware, machinery, nails, &c. The trade is as lifeless as it could well be, but the return of a new year excites new hopes, which we hope will not be disappointed. The corporation of Dunsbury are inviting tenders in this market for 650 tons of gas-pipes of from 16 to 24 inches in diameter. At Motherwell the malleable ironworkers have been put on a day's notice, which they fear beakens a coming reduction.

This keen weather is assisting the coal trade, and prices are rather firmer. The middlemen are meeting with a good deal of sharp criticism on account of their keeping up prices—Wishaw coal being purchasable at the pit's mouth for 7*s.* 6*d.* to 8*s.* 6*d.*, and as the transit dues only amount to 3*s.* a ton, the price charged is exorbitant—being 16*s.* or 17*s.* a ton. Gas coal is in fair demand at good prices. The Fife coal trade is active, and a consequent scarcity of wagons is being experienced, but prices have not been in any way changed. Steam coal is quiet, on account of the cessation of the steam ship traffic during the dead winter months. The coal shipments of the week were 37,141 tons, against 52,700 tons in the same week of 1874, but both last week and this there has been an irregularity in the returns, which accounts for the inequality of shipments.

In the Doura district, Ayrshire, a reduction of colliers' wages has been notified, and there is so much binging going on in the Lanarkshire pits that it would be futile to adopt Mr. Macdonald's advice, and demand an advance, however trifling.

The directors of Merry and Cuninghame (Limited) have declared an interim dividend at the rate of 10 per cent. per annum.

The reception which the miners' delegates, headed by the hon. member for Stafford, met with from the Lord Advocate must, we think, have been highly pleasing to these gentlemen. His lordship, we are told, "would look into the matters which had been brought before him, and would do what he could to remove the objections which had been stated." No promise could well be larger, and so the deputation left rather flattered by their reception, and the expectations to which it gave rise.

Andrew Martin has withdrawn from the firm of Hugh Martin and Sons, ironmasters and iron manufacturers, Coatbridge, on Aug. 29 last.

ODESSA WATERWORKS CONTRACT.—An action was tried at the Court of Session, on Dec. 11, at the instance of John Moore, civil engineer, London and Austria, against Messrs. R. Laidlaw and Son, contractors and engineers, Glasgow. From the pursuer's statements it seems that he and a Russian obtained from the municipality of Odessa a concession for the construction and working of certain waterworks, to be constructed according to plans. The pursuer subsequently entered into negotiations with the defenders, which resulted in an agreement being concluded, under which the pursuer sold his preferable right of constructing and carrying on the waterworks to the defenders, who were to pay him the sum of 12,000*l.*, afterwards reduced to 7000*l.* It is for payment of this amount that the pursuer raised the present action. After various procedure a proof was ordered for Monday, but to-day counsel for the parties stated that the action had been compromised by the defenders paying 3500*l.*—one-half in cash, and the other half bills.

THE BLOCHALN IRON COMPANY.—A report by the liquidators of the Blochaln Iron Company has been issued to the shareholders and creditors, from which it appears that the losses sustained up to Aug. 1 last amounted to 159,751*l.* 12*s.* The excess of this sum over the amount formerly reported is 24,702*l.* 12*s.*, and arises from further losses on trade account, the depreciation of stock, unfulfilled contracts, and interest on liabilities. The final call made upon the shareholders has, so far as due, been well met. With the funds realised the liquidators have paid to the creditors' account 10*s.* in 1*l.*, and they expect, as soon as the balance of call is received, to pay a further dividend. The great difficulty of the liquidation is the realisation of the works, which the liquidators now propose to advertise for sale.

MINING DISTRICT OF WEST SCOTLAND.—A meeting of the Board for Examinations, under the Coal Mines Regulation Act, 1872, was held at Glasgow, on Dec. 11, by instruction from the Secretary of State, when the following members were present:—Mr. A. Whitelaw, M.P. (in the chair), Mr. P. Starrock, rock, Messrs. J. Hendrie, — Ferrie, A. Grey, J. Gemmel, T. Smith, J. Gillespie, — Alexander, H.M. Inspector of Mines; and Mr. C. Macpherson, the secretary. The board agreed, with reference to the ensuing examination of candidates for certificates of competency as managers of mines, that the schedule of examination should be altered so as to omit Class I., and that no exception should be allowed so

the rule that all candidates must now pass in the subjects prescribed under Class II. The secretary was directed to communicate with the Secretary of State, and to recommend that the next examination should be held on Jan. 23 ensuing.

THE LUBRICATING POWERS OF LIQUIDS.—At the Glasgow Philosophical Society, Mr. R. D. Napier read a paper "On an Apparatus for Testing the Lubricating Powers of various Liquids, showing some hitherto unrecognised facts at variance with the commonly received laws of friction." The object of the paper was to exhibit the results of certain experiments in relation to friction, and thence to demonstrate the fallacy of the hitherto recognised laws relating to that difficult subject—in fact, to prove that, notwithstanding the numerous experiments that had been made and published, and others since his day, we were still in utter ignorance of the true laws of friction. For instance, the usually received law that it was independent of the velocity was shown to be fallacious. In some cases brought forward the friction was found to increase in a very high ratio to the velocity, in others to remain constant, while again in some it was found to diminish. An instrument lately invented by Mr. Napier for the purpose of testing the lubricating qualities of different oils was exhibited, by which practical evidence of some of the above results was shown.

THE SCOTCH MINING SHARE MARKET—WEEKLY REPORT AND LIST OF PRICES.

During the past week there has been very little improvement in the amount of business transacted, and prices are very little altered. In coal and iron shares, Merry and Cuninghame (now quoted ex div.) and Niddrie have improved; others are dull and unchanged, or slightly lower. In copper shares, Canadian Copper Pyrites and Gunnislake (Clitters) have slightly advanced; others show little variation, although mostly a little lower. There can be no doubt but that for the present state of the market an important rise would take place in Gunnislake shares, as the reports from the mine for some time back have been of an exceedingly favourable character, and one winze is worth 120*l.* per fathom. The company consists of 9830 shares of 5*l.* each, now quoted at 2 to 2*1*/₂. On Nov. 18 last the company had all charges made up to Aug. 22, and sale on Sept. 17 credited and a balance in hand of 1391*l.* They then declared a dividend of 1*s.* per share, carrying forward 1100*l.* Now, at last sale they made a profit of 600*l.*, and will do as much at least at the next sale. These two profits, with the balance carried over, make 2300*l.* to credit at next balance, out of which, even after paying 3*s.* per share of a dividend, there would be a balance of 826*l.* to carry forward. However, assuming that only 2*s.* 6*d.* per share is paid, what is the worth of the shares? 2*s.* 6*d.* per share on 9830 shares for four months is equal to 3684*l.* per annum; and this, to pay investors 10 per cent., represents 36,840*l.* of capital, making the real value of the shares nearly 4*l.* each, and at present they are only 2 to 2*1*/₂—that is to say, the shares should rise on the merits of what the mine has already done to twice their present price; and this is not taking into account how the mine is worked, the great discoveries that have been made, and what is most important of all, the continued improvement in the bottom level. In Americans rather more business, and Emmas have improved. In oil and miscellaneous shares business continues at a standstill. Conglog firm at 10*1*/₂ to 10*3*/₄; the monthly report appears in my report of Thursday's business; it is more favourable than any yet received. A detailed list of the several days' business follows:—

On Thursday last a very small business was done, and little change took place in prices. Benhar, 14*1*/₂ to 14*3*/₄. Canadian Copper Pyrites done at 40*s.* 3*d.* and 40*s.*, closing 39*s.* to 41*s.* Ebbw done at 22, closing 22 to 22*1*/₂. Emma 17*s.* to 19*s.* Glasgow Carradon done at 15*s.* closing 32*s.* to 33*s.* Gunnislake (Clitters), 1*1*/₂ to 2. Huntington, 56*s.* Marbella done at 5*1*/₂, closing 5*1*/₂ to 5*1*/₂. Merry and Cuninghame firm, at 72*s.* 6*d.* to 73*s.* Monkland ordinary flat, done at 87*s.*, closing 87*s.* to 88*s.* guaranteed preference firm, at 8*1*/₂ to 8*3*/₄. Niddrie, 65*s.* to 68*s.* Omoa and Cleland, 4*s.* to 49*s.* Tharsis, 26*s.* to 26*1*/₂. Young's Paraffin done at 5*1*/₂.

Conglog Slate and Slab, 10*1*/₂ to 10*3*/₄. The month's report of the present state and prospects of this quarry has been issued, and is the most satisfactory of any that have been received. The following is extracted from it:—The vein is situated on the slope of Conglog Hill, rising westwards, and lying at an angle of 52°; into this vein three tunnels have been driven, forming the three galleries distinguished by the numbers 1, 2, and 3. Gallery No. 1: This tunnel is driven in a northward direction 40 yards, at the end of which cross tunnels have been driven to the east and west. The one to the east is 40 yards long, and the one to the west 31 yards long. One chamber has been opened in the east tunnel, and two in the west; these three chambers are ready to commence slate and slab making as soon as the mill is erected. The quality of the rock throughout this gallery is all that can be desired. In the west tunnel and chambers especially the slate is excellent, splitting with such remarkable ease as is rarely found. Gallery No. 2 is 48 ft. below Gallery No. 1. This tunnel is 150 yards long, all driven through good workable slate-rock. Gallery No. 3 is 70 ft. below No. 2. The tunnel here is 120 yards long, all driven through a valuable slate-rock. An inspection of the rock in these three tunnels will prove that it is a most regular bed of slate, with joints intersecting at convenient distances, and with the slants in regular order. A cross section is also sent, proving the immense size and enormous quantity of slate which these three galleries will yield. It shows that the yield of marketable slate from this (which is only a small portion of the property) will be 55,105 tons; and it should be borne in mind that a longer tunnel is not yet driven to half the thickness of the vein, and this immense body of slate-rock runs throughout the whole of the property. The tramway to connect the quarry with the Festiniog Railway, leading to Portmadoc, is nearly completed.

The foregoing are the leading points in the report, but it is worthy of attention that the slate rock in this property is now proved as to quality to be of a superior and unusual facilities for working it. The royalty is 1-12th, which is much lower than that of most of the quarries in the district. The slate trade is stated never to have been in such a flourishing state as it now is, and, notwithstanding an advance of 15 per cent. which has just been made in the price of slates, the demand is considerably in excess of the supply. With reference to the turnout from the small portion of the property referred to in the report as over 55,000 tons, these figures can be relied upon, as the manager is an experienced quarryman, who is always rather under than over in his estimates; taking this at the very low valuation of 10*s.* per ton profit it gives 551,050*l.* The cost of laying the quarry open has not exceeded 3500*l.* another 1000*l.* has been spent on the tramway, leaving 3500*l.* of the first issue to provide machinery, &c. It would be difficult, if not impossible, to find another property which will give such profits for the amount laid out. Those who are well acquainted with the quarry say that it is one of the best and safest investments of the day, and the shares must advance, and the quarry become another Van, commanding the attention of the public at three times their present price.

On Friday rather more business was done, but the market continued to droop. Arniston offered at 6*s.* ex div.; the first meeting of the shareholders of this company was held to-day. The report, recommending an interim dividend at the rate of 12*s.* per cent. per annum (a full extent of which I gave in a former report), was unanimously adopted. Not much further information was elicited at the meeting, beyond that one of the shareholders, who had been to examine the colliery, said that the shareholders were much indebted to the able and honourable body of directors for bringing about such a satisfactory result. He was satisfied it was a good concern, and all the more so as being in the management of such a board, and of a manager whom he considered the right man in the right place. The Chairman said he had no doubt but that the company would be a great success, and that the new works were being vigorously pushed on. Benhar, done at 14*1*/₂. Cairnbarrow changed hands at 6*s.* Canadian Copper Pyrites, done at 39*s.* 6*d.* and 2, closing 39*s.* 6*d.* to 40*s.* Ebbw, done at 22, closing 22*1*/₂ to 23. Emma, flat, closing about 16*s.* Javali, 4*s.* 3*d.* to 4*s.* 9*d.* Glasgow Carradon, done at 15*s.* closing 32*s.* to 33*s.* Gunnislake (Clitters), 1*1*/₂ to 2*1*/₂. Marbella, 5*1*/₂ to 5*1*/₂. Merry and Cuninghame, done at 72*s.* 6*d.* to 73*s.* the all-paid shares changed hands at 9*s.* and 10*s.*, closing firm at 10*s.* to 10*s.* The directors of this company announce an interim dividend at the rate of 10 per cent. per annum for the half year to Dec. 31, 1874, to account of the dividend for the next year ending June 30, 1875, payable on Jan. 2 next. Monkland, ordinary, again flat, done at 86*s.* and 88*s.*, closing 85*s.* to 85*s.* 6*d.*; guaranteed preference, 8*1*/₂ to 8*3*/₄. Niddrie, 65*s.* to 68*s.* Omoa and Cleland, done at 49*s.* and 50, closing 48*s.* to 50*s.* Scottish Australian, done at 23*s.* 9*d.* Shotts Iron, new, changed hands at 6*s.* In Tharsis a good business was done between 26*s.* and 28*s.*, closing 26*s.* to 26*1*/₂ to 26*1*/₂. Yorke Peninsula, ordinary, firmer, at 7*s.* 6*d.* to 8*s.* 9*d.*

On Saturday (being contango day) a fair amount of business was done. Benhar done at 14*1*/₂, closing 14*1*/₂ to 14*3*/₄. Canadian Copper Pyrites, 38*s.* to 40*s.* Cape Copper, 30 to 30*1*/₂. Chillington, 6 to 6*1*/₂. Colorado Terrible, 3*s.* to 3*1*/₂. Ebbw, 21*1*/₂ to 22. Flagstaff done at 2. Gunnislake (Clitters), 1*1*/₂ to 2*1*/₂; the reports from this mine continue of the same very favourable character, the shares must, therefore, be a good purchase at present prices. Marbella lower at 5*1*/₂ to 5*1*/₂. Islay Lead, 4*s.* to 5*s.* Merry and Cuninghame done at 72*s.* 6*d.* closing 72*s.* 6*d.* to 73*s.* 6*d.* The all-paid shares 9*s.* to 10*s.* Monkland ordinary done at 87*s.*, closing 85*s.* to 86*s.* Guaranteed Preference, 8*1*/₂ to 8*3*/₄. Nant-y-Glo and Blaen preferred, 40 to 45. Niddrie, 65 to 68. Omoa and Cleland offered at 48. Rio Tinto about 1*1*/₂ discount. Scottish Australian again done at 23*s.* 9*d.* South Roskear, 1 lower, at 4 to 5. Tharsis done at 26 to 26*1*/₂, closing 26*s.* to 26*1*/₂. The following were the rates of continuation current to day:—Contango: 1*s.* on Benhar; 2*s.* 1*1*/₂ on Canadian Copper Pyrites; 2*s.* on Emma; 2*s.* on Glasgow Carradon; 4*s.* on Port Washington; 2*s.* 6*d.* on Huntington; 7*s.* 6*d.*, 8*s.*, 7*s.* 6*d.*, on Marbella; 4*s.* on Monkland ordinary; 1*s.* to 1*s.* 6*d.* on Tharsis; 1*s.* 3*d.* on Tharsis new; 3*d.* on Young's Paraffin. Even:—Omoa and Cleland. Backwardations:—1*1*/₂ d., 1*d.*, on Merry and Cuninghame; 6*s.* 3*d.* on Shotts.

On Monday a good business was done, but prices were very little changed. The account for settlement, Dec. 30, opened to-day. Thursday, the 24th, will be contango day. Benhar done at 14*1*/₂, closing 14*1*/₂ to 14*3*/₄. Cairnbarrow done at 6*s.* Canadian Copper Pyrites done at 2, closing 39*s.* to 41*s.* Ebbw, 21*1*/₂ to 22. Emma done at 18*s.*, closing 18*s.* 6*d.* to 19*s.* 6*d.* Flagstaff done at 35*s.* 6*d.* Glasgow Carradon done at 31*s.* and 31*s.* 9*d.*, closing 31*s.* 6*d.* to 32*s.* Gunnislake (Clitters), 2 to 2*1*/₂. Last Chance done at 4*s.* Marbella done at 5*s.*, closing 5*s.* to 5*s.* 10*s.* to 5*s.* 10*s.* Merry and Cuninghame done at 69*s.* 6*d.*, closing 69*s.* to 69*s.* 6*d.*; these prices are less the dividend of 3*s.* 6*d.*, so that the price is unaltered. All paid shares wanted at 10, but no sellers. Monkland ordinary done at 87*s.*, closing 85*s.* to 86*s.* Niddrie better, at 65*s.* to 68*s.* Tharsis firmer, done at 26*s.*, closing 26*s.* to 26*1*/₂ to 26*1*/₂. Young's Paraffin, 5*s.* to 5*s.* 3*s.* 6*s.* ex div.; taking the dividend (6*s.* 4*s.* d. per share less income tax) into account, the price is unaltered.

On Tuesday the business done was not so good, and the market dull. Arniston slightly lower, at 5*s.* ex div. Benhar firm, done at 14*1*/₂ and 14*3*/₄. Bolckow Vaughan, A, done at 53. Canadian Copper Pyrites in demand, done from 40*s.* to 41*s.*, closing 41*s.* to 41*s.* 6*d.* Cairnbarrow done at 5*s.* Ebbw done at 22 and 21 15*s.* 10*s.*, closing 21*1*/₂ to 22. Glasgow Carradon done at 31*s.*, closing 30*s.* 6*d.* to

31s. 6d., and new shares changed hands at 1. Gunnislake, 2½ to 2¾. Huntington done at 55s., closing 55s. 6d. Marbella done at 5½, closing 5½ to 5¾. Merry and Cunningham done at 60s. 6d. and 70s., closing 70s. to 70s. 6d.; several enquiries for the all-paid shares, but none offering. Monkland ordinary done at 4½, closing 4½ to 4¾. Niddrie done at 3½, closing 3½ to 3¾. 6d. to 6d. 6d. Shotts Iron, new, changed hands at 5½, being ½ lower than last price, but the transaction was for cash. Tharsis done at 2½, closing 2½ to 2¾ to 2½ to 2¾.

On Wednesday the business done was small, and prices continued unchanged. Bolekow Vaughan A done at 55; Canadian Copper Pyrites again in demand, done at 41s. 6d. and 42s., closing 41s. 6d. to 42s. 6d.; Cape Copper firm, at 30½ to 30¾; Ebbw, 21½ to 22; Emma good, done at 18s. 6d., 19s., and 19s. 6d., closing 20s. to 22s.; Gunnislake (Clitters), 2 to 2½; Islay Lead, ¼ to ½; Javali firm, at ¼ to ½; the directors of this company announce that advices have been received, dated Nov. 5 last, from their manager, giving the results of two months' working, showing a net profit of 757. 15s. 1d.; and, taking into account that the returns for previous months have also shown profits, this is very satisfactory. Kapunda, 1s. 3d. to 6s. 3d.; Marbella done at 5½, closing 5½ to 5¾; Merry and Cunningham done at 3½, closing about that price; Monkland ordinary, 55s. 6d.; guaranteed preference done at 8 16ths and 8½; Niddrie good, done at 4½, closing 4½ to 4¾; 6d. to 6d. 6d.; Panfillo done at 1. Rio Tinto firm, at 8; Russia Copper unchanged, at 2½ to 2¾; Scottish Australian better, at 28s. 9d. to 31s. 3d.; Tharsis done at 2½ to 2¾, closing 2½ to 2¾ to 2½ to 2¾; Yorke Peninsula ordinary remain at 6s. 3d. to 6s. 9d. Subjoined will be found the latest prices:—

COAL, IRON, STEEL.			Latest price.	
Amount share.	paid up.	Name.		
100	10	Arncliffe Coal (Limited)	5½	
100	10	Benhar Coal (Limited)	14½	
100	35	Bolekow, Vaughan, and Co. (Limited)	55	
100	5	Calratable Gas Coal (Limited)	6½	
100	10	Chillingham Iron (Limited)	6½	
32	29	Ebbw Vale Steel, Iron, and Coal (Limited)	22	
10	10	Five Coal (Limited)	5½	
10	10	Glasgow Port Washington Iron and Coal (Limited)	78s.	
10	10	Ditto All paid	6½	
10	10	Lochore and Caplethrae (Limited)	7½	
10	10	Marbella Iron Ore (Limited)	5½	
10	10	Merry and Cunningham (Limited)	3½	
10	10	Ditto All paid	10	
10	10	Monkland Iron and Coal (Limited)	4½	
10	10	Ditto All paid	4½	
100	100	Nant-y-Glo and Blaenau Ironworks pref. (Limited)	42½	
10	10	Niddrie Coal (Limited)	68s.	
10	4	Ormon and Cleland Iron and Coal (Limited)	48s.	
1	1	Scottish Australian Mining (Limited)	1½	
1	5s.	Ditto New	¾	
50	50	Shotts Iron	78½	
10	4	Ditto New, issued at 2½ premium	6	
COPPER, LEAD, SULPHUR, TIN.				
10	7	Canadian Copper Pyrites (Limited)	42s.	
10	10	Ditto All paid	6½	
10	7	Cape Copper (Limited)	30½	
1	1	Cwm Bychan Silver-Lead (Limited)	¾	
1	1	Cwm Lery Lead (Limited)	¾	
—	8	Drake Walls	5	
2	2	Dunstable Wheel Phoenix Tin (Limited)	¾	
1	1	Glasgow Caradon Copper Mining (Limited)	31s.	
1	1	Ditto New	1	
10	7½	Gunnislake (Clitters)	2½	
10	9	Huntingdon Copper and Sulphur (Limited)	55s.	
1	1	Islay Lead (Limited)	¾	
25s.	25s.	Kapunda Copper (Limited)	¾	
4	4	Panfillo Copper Mining (Limited)	1	
10	9	Rio Tinto (Limited)	8	
10	10	Russell Copper Mining (Limited)	2½	
—	6	South Rooker	4½	
10	10	Tharsis Copper and Sulphur (Limited)	26 7-16	
10	7	Ditto New	18½	
—	69s.	West Maria and Fortescue	¾	
1	1	Yorke Peninsula Mining (Limited)	¾	
1	5s.	Ditto 15 per cent. Guaranteed Preference	¾	
GOLD, SILVER.				
5	5	Colorado Terrible Mining (Limited)	3½	
20	20	Emma Silver Mining (Limited)	1	
10	10	Flagstaff Silver Mining (Limited)	2	
2	2	Javali Gold Mine (Limited)	¾	
5	5	Last Chance Silver Mining (Limited)	1	
OIL.				
10	7	Dalmen Oil (Limited)	5½	
5	5	Midlothian Mineral Oil (Limited)	2½	
10	8	Uphall Mineral Oil (Limited)	5	
10	10	West Calder Oil (Limited)	7½	
10	8½	Young's Paraffin Light and Mineral Oil (Limited)	5½	
MISCELLANEOUS.				
10	10	Conglog Slate and Slab (Limited)	10½	
10	10	Highland Peat Fuel (Limited)	10	
50	25	London & Glasgow Engineering & Iron Shipbuilding	23	
1	1	North Cornwall Kaolin (Limited)	1½	
20	7½	Peruvian Nitrate (Limited)	5	
10	10	Scottish Wagon Company (Limited)	12 1-16	
10	1	Ditto New	22s.	

Last day for this account Dec. 24; settling day, Dec. 30.

NOTE.—The above list of mines and auxiliary associations is as full as can be ascertained, Scotch companies only being inserted, or those in which Scotch investors are interested. In the event of any being omitted, and parties desiring a quotation for them, such information as can be ascertained from time to time to be inserted in this list, they will be good enough to communicate the name of the company with any other particulars as full as possible.

J. GRANT MACLEAN, Stock and Share Broker.

Post Office Buildings, Stirling, Dec. 17.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Dec. 17.—Quietness appears to characterise lead mining in Derbyshire, so that the quantity of ore raised is not equal to what might be expected, considering the number of mines opened out and the number of men employed. Indeed, the output of late years appears to have fallen off very considerably, notwithstanding the fact that new companies, with plenty of capital, have started, with what appeared the brightest of prospects; still the fact is on record that a much less tonnage of ore was raised last year than there was seven years ago. This certainly does not look well for one of our oldest lead mining districts, in which there are upwards of 190 mines, getting more or less lead ore. Some of them, however, after being worked a short time, have been abandoned, so that there are in all probability not more than 20 that raise each above 100 tons of ore. One of the best has been the Mill Close Sloop, belonging to the Messrs. Wass, which the year before last was credited with nearly half of all the ore raised in the county. The collieries, however, are now turning out large quantities of coal, the demand for London being just now rather brisk. Prices have slightly advanced at some of the pits, whilst merchants in the metropolis are now charging more than they have done during any period of the present year. The iron trade continues tolerably brisk, despite the stagnation at Sheffield, to which a good deal of Derbyshire iron is sent.

Several of the heavy branches of the Sheffield trade are in anything but a healthy state, and at some of the works the men have accepted a reduction of wages varying from 10 to 20 per cent. The Bessemer departments are still quiet, and no change is likely to take place for a month or two, when a revival is generally anticipated. The foundries are fairly off for orders, but the cutlery branches are the reverse of active.

It appears that there has been great difficulty of late in sending coal away from the principal collieries in the South Yorkshire district, owing to the want of sufficient locomotive power on the part of the Manchester, Sheffield, and Lincolnshire Railway Company. So seriously has this been felt that a meeting on the subject was held at Sheffield on Tuesday, when a deputation was appointed to wait upon the directors for the purpose of bringing the matter under their notice. It does not appear that any immediate remedy can be applied under the circumstances, seeing that the necessary power cannot be obtained at once, even if the directors were desirous of obtaining it. That the coal traffic, however, is of very great importance it need only be stated that the Manchester and Sheffield Railway last year carried 3,943,231 tons. The Great Northern has of late taken an increased tonnage of Silketones to London, whilst rather more of the ordinary Thick coal has been sent.

We regret having to announce the death of Mr. R. C. Clarke, of Noblethorpe Hall, Silketone, which took place a few days since at Torquay, at the comparatively early age of 36 years. Deceased, who was highly respected throughout South Yorkshire for his liberality and amiable qualities, was the owner of the old Silketone Collieries, and which bear his name. His family were the first to open out the Silketone coal by means of vertical shafts at that place. Deceased was interred at Silketone, on Wednesday last, amid the regret of his numerous workpeople, to whom he had been a most indulgent master.

Mr. Thomas Bell, Inspector of Mines for the West Lancashire, North Wales, and Chester district, has been appointed to the South Durham, Westmoreland, and Cleveland district, the present Inspector for which district removes to the Northumberland, Cumberland, and

North Durham district. Mr. Bell will be succeeded by Mr. Henry Hall, late assistant Inspector in the South Wales district.

ACTION AGAINST THE PROMOTERS OF A LIMITED COMPANY.—An action of great interest to shareholders in limited companies is pending against the promoters of the Cardigan Steel and Wire Company (Limited), having its works at Sheffield. At a recent meeting of shareholders it was decided to proceed against the promoters to recover damages sustained, it was alleged, by certain misrepresentations contained in the prospectus. The company was formed in April, 1873, with a nominal capital of 60,000l., in 100l. shares, and at the first annual meeting a loss of 12,000l. was reported. On the accounts being inspected the loss was found to be 14,000l., and further discoveries were made, and led to the following proceedings. Writs have been issued against three of the promoters, and the usual declarations have been delivered. It is intended to bring the action in the Superior Court, and if that attempt is unsuccessful the action will be brought on at the next Leeds Assizes. For convenience, the action is brought by one of the principal shareholders, who claims damages to the amount he invested, on the ground that he was induced to take his shares on the faith of a certain prospectus, which he alleges contained false representations.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Dec. 17.—The aspect of the Iron Trade in South Staffordshire has undergone little change since our report of last week either in the pig or finished departments. Makers of branded iron continue steadily occupied on orders for sheets, boiler plates, nail rods, and angles, and all the leading firms are realising full list quotations. Bars are 10½, 10¾, 11½, and 11¾. 6d. per ton respectively for the three ruling marked qualities, but the two last must be regarded as rather exceptional quotations. The rate for ordinary sheets (singles) ranges from 12½ to 13½ per ton. Sheets of the class specially adapted for galvanising purposes are very fairly under order, chiefly to meet the requirements of local manufacturers of corrugated roofing on colonial account. Common bars are changing hands this week at 9½, 5s. per ton, and at this low rate certain of the smaller firms are freely accepting orders, rather, it would appear, with the view of keeping their hands together than with any idea of realising profit. The pig-iron market is, on the whole, steadier this week, and prices range from 3½ to 5½. 10s. for the better quality of all-mine. Cold-blast pigs are coming in fair quantity at 6½. 10s. per ton, delivered.

Colliery operations, both in North and South Staffordshire, have been considerably interrupted this week by the heavy snowfall, and the market for house coal has, in consequence, shown some firmness. In South Staffordshire an expectation prevails that the price of the best Thick coal will be further reduced 2s. per ton on Quarter-day, but the leading firms do not encourage the belief, in the absence of any reduction in the present great cost of coal getting. For coal of the commoner class a considerable reduction in price has already taken place during the quarter. Furnace coal is selling at 10s. per ton. Slack does not command much attention in any part of the district.

Messrs. John Bradley and Co. (Mr. W. O. Foster) have just re-lighted an additional blast-furnace at Shut End, near Kidderminster. This makes the total number blowing in the district 81, against 95 at the corresponding period of last year.

In the Iron Trade of North Staffordshire the current business doing is principally on account of the home market, and orders are much competed for. Some tolerable shipments to the Far East in completion of old contracts have been made during the past fortnight. The following are among to-day's quotations on the Birmingham Stock Exchange:—Sandwell Park Colliery (10½ paid), 38s. sellers; ditto new (1½ paid), 25s. per; Patent Shaft and Axle, 5½ prem.; Pellsall Coal and Iron, 2½ dis.; Chillingham, Iron, 6; John Bagnall and Sons (Limited), 7; Ivy House Colliery, ½ dis., buyers; Cannock and Huntingdon Colliery Company (Limited), 1 dis., buyers; Oldbury Carriage, 8½; Glasgow Wagon, 15½; Staffordshire Wheel and Axle, 2½ prem. The general tone of the market is steady, and the tendency is, on the whole, firmer.

It appears, from reports recently issued, that the total output of coal in South Staffordshire during 1873 was 11,100,000 tons, being an increase of 550,000 tons on the previous year. The yield of the current year will probably be much less, owing to the quiet state of the trade during the last six months.

REPORT FROM LANCASHIRE AND CHESHIRE.

Dec. 17.—During the last week there has been an active demand for all descriptions of coal, and prices have been firmer in consequence. House coal has been much enquired for, and owing to the scarcity of rolling stock the railway companies have not been able to furnish the necessary wagons. In the Wigan district the men who previously had given notice of a 10 per cent. advance in wages have decided to restrict the output, and this will no doubt, if carried out, tend to a further increase of prices. The latest information as to the movements of the men point to a general Union for the whole of Lancashire, which would no doubt have benefited them greatly in the late dispute.

The case to which I referred in my last report as to the weighing clauses has been decided in favour of the employers.

There has been a marked falling off in the consumption of coal in London during the last eleven months, as compared with the same period of 1873. There was an increase in the quantity carried by sea of 26,130 tons, but a decrease by railway of 436,669 tons. Coal which is now charged 32s. per ton, delivered in the metropolis, can be bought at the pits at from 14s. to 15s. per ton, whilst the carriage rate, including the 1s. 1d. per ton for City dues, and 1s. 3d. for wagon hire, only amounts to 9s. 10d., making the actual cost, without profit, from 23s. 10d. to 24s. 10d. per ton. House coal is plentiful now that all our mining districts are at work; yet the coal to the consumer in London is as high as it was in December, 1872 and 1873, and 6s. per ton higher than in December, 1871. The loss to the Corporation of London will be 21,200l., and to the various railway companies upwards of 166,000l., as compared with 1873 so far.

GWAN CAR-GURWEN COLLIERY.—The first annual general meeting of shareholders was held last week, at Rotherham. Mr. Cooper, the Chairman, in moving the adoption of the report and balance-sheet for the 11 months ending Sept. 30, remarked that the concern had made a net profit for that period of 3308l. 14s. 2d., in addition to a very considerable sum which had been expended out of revenue in extension and improvement of the plant. The accounts were considered satisfactory, and unanimously adopted. A dividend of 2l. per share, equal to 10 per cent. per annum, was declared, and was paid at the meeting.

The Examiners for the South-West District held their Christmas half-yearly meeting at Bristol last week. On Tuesday morning, the three Examiners—Mr. W. Needham, Newport; Mr. C. A. Harrison, Yobster, near Bath; and Mr. J. T. Thomas, Coleford, Dean Forest—met at the Guildhall, and distributed the examination papers of the candidates. Eight gentlemen presented themselves to the Board and worked the papers, completing this part of the examination on Tuesday evening. On Wednesday morning the viva voce examination was begun, and each candidate was subjected to a close questioning on his written answers, and on the general subject of practical mining. Mr. Lionel Brough, her Majesty's Inspector of Mines for the district, presided each day at the setting of the Examiners, and did good service in requiring, under the provisions of the Mines Regulation Act, a high standard of efficiency in all the subjects of examination. At the close of the sitting on Wednesday evening the Examiners reviewed their work, and agreed with the Inspector to report to the Mining Board, which met on Thursday, that Messrs. James Harris, Lydbrook, near Ross; M. G. Morgan, Bristol; J. M. Johnson, Cinderford; B. Owen, Aberystwyth, and T. Morgan, Talywain, near Pontypool, had passed the examination satisfactorily, and were entitled to receive from the Secretary of State certificates of competency under the Mines Regulation Act.

FORTUNATE ESCAPE.—A few days since the manager, Mr. Evans, proceeded to the bottom of the Dorothea Quarry, accompanied by the newly-appointed manager, Mr. Owen, for the purpose of letting to the men, and whilst talking to a rockman "upstairs," who stood upon a block in the act of liberating it from its fellow, the huge block, some tons in weight, suddenly gave way, and had it not been for the instantaneous interference of Mr. Evans, dragging his friend aside, they would have been both inevitably crushed to death upon the spot. When it became known at the works that the respected manager, Mr. Evans, was about to leave, and take the management at Penrhyn Quarry, the Dorothea men at once appointed a committee to raise a fund and offer him a suitable present. The fund at first was supposed to be confined entirely to the men employed at the works, but when it became evident that very many of his acquaintances and friends felt anxious to share in their appreciation of his worth, Mr. Robert W. Jones, Nantlle, was appointed secretary, and Mr. Thomas Evans, Brynkrir House, Penygroes, treasurer. The fund, we find, is fast accumulating.—North Wales Chronicle.

PERCUSSIVE ENGINES.—Mr. JOHN DARLINGTON, of Coleman-street Buildings, Moorgate-street, has patented some improvements in percussive engines, applicable to the stamping of ores, minerals, or stone, to the dressing of stone, beating of flat, rivetting plates, sharpening mine tools, planishing and hammering metals, and to the boring of rocks. The pressure fluid distributed by the piston passing portways in the cylinder, or the cylinder passing portways in the

piston. The piston, when necessary, partly rotated by an arrangement on one of its ends, or by means of a bar ratchet and detent, the piston made partly hollow, and a sliding block employed, as well as pistons of various depths.

IRON ORE REGIONS OF THE UNITED STATES—No. II.

No development has yet been made of the iron ores or other minerals of the State of ARKANSAS, evidently extremely rich in various kinds, and well supplied with choice fuels. Railroads are fast opening up these resources to the market, and the present condition of the State offers excellent opportunities for investment. This State can, without exaggeration, boast of her mineral deposits, especially when one takes into consideration the various parts, their general rich quality and enormous quantity. Here are magnetic, hematite, specular, calcareous, and other varieties of iron ore, lead, zinc, and coal; manganese and associated minerals, together with marble, gypsum, salt, kaolin, whet and honestone, slate, limestone, granite, marl, paint, and nitre earth. The coal fields of the State embrace an estimated area of 12,000 square miles, and in the valley of the Arkansas river, where the most coal mining has been carried on, the beds are from 4 to 6 ft. in thickness. This coal is similar in structure and appearance to the Cumberland coal of the State of Maryland, and its quality by analysis is very similar. It is also an excellent coal for both steam and manufacturing purposes. The Arkansas river runs for 150 miles through the coal formation. The advantages that Arkansas possesses in this respect must shortly enlist the attention of coal mining capitalists generally. The hematite iron beds in some places cover acres of surface where there is abundance of the best kind of timber for making charcoal and limestone of good quality for fluxing purposes. Never-failing large water powers also are contiguous to the iron ore deposits. The anthracite Spadra coal has been proved at Spadra to underlie 1800 acres. The coal contains, according to the analyses of Owen, Liebig, and Bierwirth, about 85 per cent. of fixed carbon, is free from sulphur and smoke, and, according to Prof. Owen, the State geologist, is superior in quality to the richest semi-anthracites of Pennsylvania. Between the two coal veins there is a bed of about 30 ft. of shale, containing horizontal seams of carbonate of iron ore 3 in. to 6 in. thick, and the quantity of these per acre will reach at least 10,000 tons, if not 15,000 tons; being free from phosphorous, and the coal containing no sulphur, steel can be obtained without coking the latter. There is also fire-clay, potter's clay, and sand of the best quality for glass making on the property, and lime for fluxing the iron is found within 20 miles of Spadra (at Pirey) in any quantity.

In CONNECTICUT few magnetic ores occur, but some exist which have been rather noticed geologically than commercially. In the brown hematites, however, Connecticut possesses the famous Salisbury ore beds, producing an iron celebrated for its quality previous to the revolution, and with the march of progress retaining its reputation in latter years as a car-wheel iron. At Kent was a very important ore bed, lying in the low mountain, and very abundant, although yielding poor iron generally. At Mine Hill, in Roxburg, a vertical vein of spathic ore occurs. The hill is 380 ft. high, and the vein is traceable, with a width of 6 or 8 ft., completely through it. The ore furnishes by analysis—protoxide of iron, 60; carbonic acid, 36; manganese, 1.05; lime, 0.05; and magnesia, 0.05 per cent. The history of this ore is curious. In 1760 it was worked as a silver ore by Hurlbut and Hawley, and again in 1764 by a company, under the superintendence of a German jeweller named Feuchter, who furnished the company from time to time with small ingots of silver, showing that the process of "salting" a mine was known before the Revolution as well as in later days in the California gold mines, the Arizona diamond field, and the Otter Head tin mines. The ore could be advantageously used if properly treated for steel-making, as the raw steels of Germany are made from almost precisely similar ores. Iron ore was mined in Delaware in 1814, and continued up to 1841 and a little later, but of late years has been abandoned. The ores are exclusively bog ores, and some 200,000 or 300,000 tons in all were raised during the period named, of the value of \$600,000. Near Georgetown are the most extensive beds of bog ore found, under a stratum of black mould. This ore analysed—peroxide of iron, 80; water, 15; silica, 5; and alumina a trace=100; metallic iron, 55½ per cent. raw, increasing to nearly 66 per cent. when roasted. Although consuming thousands of tons of both pig and manufactured iron, and with many rolling-mills and extensive iron-works, engaged in ship, car, and carriage building, Delaware has not a blast-furnace. The contiguity of the splendid ores of North Carolina and Virginia with water communication, and the excellent rail facilities to the coal fields of Pennsylvania, invite to this enterprise, and it would be a profitable investment.

The iron ores of GEORGIA, which are principally primitive ores, and include magnetic, specular, and hematite, are found in very extensive deposits, and have been more or less worked for many years, particularly in Cass, Floyd, and Dade counties. With the active demand for attainable sources of ore which has sprung up within the last few years, these ores have attracted much attention, and especially during 1873 have been investigated by the engineers of foreign companies seeking investments. The principal iron mines of Georgia are found in the northern section of the State, adjoining North Carolina, among the spurs of the Blue Ridge. Among these in the metamorphic slates and quartz rock are large deposits of hematite ore, and in the gneiss are found veins of magnetic ore.

In the vicinity of the hematite beds specular ores very similar to the ores of Missouri occur. These hematites have been worked in charcoal in Habersham, Cass, and Cherokee counties, in the latter two of which very extensive deposits of ore are found in the Alatomahills, along the Etowah River. Through this region the railway from Augusta extends. These iron ores are found on both sides of the Etowah River, in Cass county, and extend into Floyd and Murray counties. On the south-west they reach into Paulding county, and in the opposite direction run through Cherokee county. Near the silicious limestones of Cass county in the sides of the hills, from 300 to 400 ft. high, are hematites extending to unknown depths. Here are also veins of close grained peroxide of iron (specular ore) found in quartz rock in great quantity, and resembling the iron mountain of Missouri. Charcoal or timber fuel is still abundant here, and the ores lie near to a branch of the Georgia Railroad, which brings the Tennessee coal field within 80 miles of these ores, and provides abundant fuel to replace the charcoal when exhausted. Manganese ores are also found under the iron ore, and limestone is everywhere adjacent. In Floyd county magnetic ores are found near Rome, which is the seat of an extensive iron industry. Limestone and water are abundant, and every inducement is offered for the investment of capital.

PERPETUAL MOTION ECLIPSED.

A machine is stated to be in process of construction at Philadelphia, the invention of Mr. John W. Keeley, who states that he has developed the enormous pressure of 7000 lbs. to the square inch. The inventor asserts that with only 2 gallons of water he will be able (it is fortunate that he refers to the future) to draw a train of cars from Philadelphia to San Francisco and back again; he further declares that he obtains this vast power without the use of fuel, without the use of chemicals of any kind, and without the use of electricity or magnetic currents. All who were present at the experiments are very reticent as to what took place, but all claim to be perfectly well assured by what they saw of the success of the discovery. Careful enquiry made in various quarters elicited certain interesting information that may be relied on, as far as it goes. It is claimed that no one knows the principle upon which the machine has been constructed except Mr. Keeley. It was placed in a shed in the yard, the entrance to which was closed by a door strongly made and securely locked. Its shape was not revealed, but it was capable of holding about 14 gallons of water. Reports in Philadelphia represent it to be spherical in its general contour. The inventor, in order to show that there were no chemicals in the water to be used, and that none had been enclosed in the machine, drew water from a hydrant near by, from which he himself first, and afterwards all the others, drank freely. Some of this hydrant water was put into the machine and shaken up. It was then allowed to drain out through

a cock at the bottom, when glasses were again filled and again drank. The water had not been changed in taste by its passage through the compartments of the apparatus. Then Mr. Keeley poured in a quantity of water from the hydrant and closed up the opening. "Instantaneously," to use the words of those present, "there was developed a pressure of 7000 lbs." This pressure was measured by a safety-valve apparatus with a proper leverage. Of course, no steam-gauge, as at present conducted, could be made to record such a pressure. This was the test that was made. The enormous pressure to be utilised by means of an engine with cylinder and piston, is in all essential respects like a steam-engine. Mr. Keeley says the power generated is inexhaustible, and will be supplied as fast as it can be used in a cylinder. The fact that it has been made to operate a steam-engine makes it certain, of course, that the expansive force is due either to a vapour or a gas. It was objected that this extreme pressure would render the machine dangerous, as liable to explode, but the answer made is that a much higher pressure may be put upon the walls of a small vessel than on those of a large one, and that only a small machine will be necessary in most cases, owing to the great vigour of the new motor.

MINING NOTABILIA.

TAN-YR-ALLT MINE (Cardiganshire).—The extraordinary course of ore cut in this mine continues to improve as driven on, and is now 12 in. solid in the south end, besides being lead-bearing for 12 in. more, and they appear to have cut into the same course of ore in a winze 17 fms. ahead of the present end, which would make the course of ore over 30 fms. in length, even supposing it did not hold good still further south, and there are no signs of its failing.

PARBOLA.—Judging from the prices of these shares, it surely cannot be known that the mine is returning at the rate of 7 tons of tin a month, that it will be in a position to return double the quantity, and pay 20 per cent. dividend on the capital.

CATHEDRAL.—The lode in the shaft continues to maintain its value—40s. sterling per fathom. The 20th winze is entering into a similar class of ore as the shaft; the lode has now been opened on for 30 fms. in length and for 13 fms. in depth. The operations now being carried out will enable good returns of copper to be sent to market in a few months' time. The next sale of ore takes place on the 30th instant.

WEST ESKDALE LLE.—Western Mine: There is no alteration to report in any of the bargains at this mine. Dressing is suspended for the moment by severe weather, but at least 40 tons of ore are now ready for market, and directly a change sets in another sale can be made.—**Eastern Mine**: No work has gone on in the bottom level during the past week, the stoppage here being from the same cause as before mentioned—severe weather. In the 24, both east and west, good progress is being made, and a fine run of ore ground is being laid open. The lode in this part presents a remarkably good appearance, with every indication of greatly improving in value. When last taken down the end east was worth 30s., and ditto west 13s. per fathom. In the 10 east, under adit, the end is without change, valued at 20s. per fathom; this level is about 30 fms. from surface. The stopes in the back have much improved, and a fair quantity of rich copper and lead ore is being brought to surface. The returns from this mine will shortly be largely increased.

NORTH LEVANT (St. Just).—This mine has discontinued giving dividends for some little time, owing principally to the unremunerative price of tin, but it is satisfactory to learn that the purser, Mr. Boys, of St. Just, says, in his letter accompanying the financial statement of the meeting held on Dec. 11, that he regrets to have to make another call (5s.), but is pleased that it is not half so large as the last, and that it is probable that no more will be required, as the mine is being thoroughly developed, and continues to improve; he is also of opinion that the constantly-increasing consumption of tin is rapidly overtaking the now diminishing supplies from Australia, so that yet further improvement is looked for after Christmas. Such news as this, coming from the source it does, augurs well for the future welfare of the adventurers in North Levent. They have for years received dividends, and it is encouraging to see that there is every probability of a distribution of profits close at hand.

The following report was received too late for insertion in its proper place:—**BRONFLOYD**.—John Davies, Dec. 16: The stopes at the back of the 96, west of No. 3 shaft, continue of the value last reported. We have lengthened the No. 1 about 4 fms. towards the shaft this month, and the lode is worth about 2 tons of lead ore per fathom in the present end. At the 73 east the men have cut some fine ribs of ore this week, and we expect to find smelting still better when we reach the north wall of the lode by a cross-cut. There is a short stope about 4 fms. long, near the shaft at this level, which would pay well for working at present, and be very likely to open valuable ground before it reaches the bottom of the 63. It has been stoped as high as practicable already without fixing stulls, so I intend to arch it to correspond with the western level; in any case we should have to wall up one side before we could timber it safely, and I find that the cost of walling up to sides and turning an arch, will exceed by very little the cost of timbering it, whereas it will have the advantage of being a permanent job, and also add to the general safety of the mine. We are getting some splendid stones of lead ore from the new trial on the middle lode, a sample of which I have sent you down to-day. At the cross-cut south from the 40 the ground is very stiff for driving, and we have not yet reached the south wall of the lode.

PURSUANT to a DECREE of the High Court of Chancery, made in a Cause "AIRE V. SMITH, 1874, A. 91," the CREDITORS of HENRY GEORGE SMITH, late of Greenwich, in the county of Kent, Merchant, deceased, who died on or about the 1st day of April, 1873, are, on or before the 9th day of January, 1875, to send by post, pre-paid, to Mr. WILLIAM HINE HAYCOCK, of No. 4, College Hill, Cannon-street, London, E.C., the Solicitor of the Defendants, the Executors of the said Henry George Smith, their Christian and Surnames, Addresses and Descriptions; the full particulars of their Claims; a Statement of their Accounts, and the Nature of the Securities (if any) held by them; or, in default thereof, they will be PEREMPTORILY EXCLUDED FROM THE BENEFIT OF THE SAID DECREE. Every Creditor holding any Security is to produce the same before the Vice-Chancellor, Sir RICHARD MALINS, at his Chambers, situated No. 3, Stone Buildings, Lincoln's Inn, Middlesex, on Thursday, the 14th day of January, 1875, at Twelve o'clock at noon, being the time appointed for adjudicating on the Claims. ALFRED RAWLINSON, Chief Clerk.

Dated this 10th day of December, 1874.
GEO. RODDAM BURN, 33, Carter-lane, Doctor's Commons, Agent for Parker and Son, of Lewisham, Plaintiff's Solicitors.

SIX HUNDRED THOUSAND POUNDS DELAWARE AND HUDSON CANAL COMPANY SIX PER CENT. STERLING DEBENTURES, due January 1st, 1875, issued through Messrs. GILEAD A. SMITH and COMPANY.
The Imperial Bank (Limited) will PAY the balance outstanding of this Debenture Loan, with the accrued interest, on the 1st January next. Three clear days required for examination.

TIN MINES, PLANT, MACHINERY, &c.—The Advertiser having purchased the LEASE of certain properties in Cornwall, for the purpose of raising Hematite Ore, wishes to DISPOSE OF TWO TIN MINES, adjoining each other on the same, as a going concern, on very favourable terms, with 30 in. cylinder ROTATORY ENGINE, 10 ton BOILER, TIN HOUSE, STAMPS, and all other MACHINERY, complete. Price £3000.
For full particulars and orders to view, address "Beta," MINING JOURNAL Office, 25, Fleet-street, London, E.C.

IRONSTONE.—ABOUT TWO HUNDRED AND NINETY ACRES may be LEASED, or probably PURCHASED at once. No agents need apply. For particulars, write to Miss FERRISON, Ploekering.

WHEAL ALLEN SILVER-LEAD MINING COMPANY (LIMITED).
A FEW SHARES in this UNUSUALLY PROMISING YOUNG MINE may be secured by applying to Mr. WM. WARD, Crosby House, 95, Bishopsgate-street Within, where samples of ore may be seen.—[See Reports of this Mine in to day's MINING JOURNAL.]

PRINCE PATRICK LEAD MINING COMPANY (LIMITED).
The Directors have this day DECLARED the FIFTH DIVIDEND, at the rate of TWENTY PER CENT. PER ANNUM, which will be PAID on the 20th of January next. By order, THOS. HUGHES, Secretary.
59, Seel-street, Liverpool, 16th December, 1874.

ST. JOHN DEL REY MINING COMPANY (LIMITED).
Notice is hereby given, that the HALF-YEARLY ORDINARY GENERAL MEETING of this company will be HELD at the London Tavern, Bishopsgate-street Within, on WEDNESDAY, the 23rd day of December next, at Two o'clock precisely.
To receive and adopt the Directors' Half-yearly Report, and to DECLARE A DIVIDEND.
8, Tokenhouse-yard, E.C., 8th December, 1874.
The Transfer-books of the company will be closed from Monday, the 14th, to Wednesday, the 23rd December, both days inclusive.

THE ALMADA AND TIRITO CONSOLIDATED SILVER MINING COMPANY (LIMITED).
Notice is hereby given, that the NINTH HALF-YEARLY GENERAL MEETING of the above company will be HELD at 47, Finsbury Circus, on MONDAY, the 21st day of December, 1874, at Twelve o'clock precisely, for the purpose of receiving reports from the directors and manager, and transacting the general business of the company.
The Register of Transfers will be closed from the 7th to the 21st December inst., both inclusive.
By order, H. G. DENNIS, Secretary.
47, Finsbury Circus, 7th December, 1874.

NEW QUEBRADA COMPANY (LIMITED).
Notice is hereby given, that an ORDINARY GENERAL MEETING of this company will be HELD at the City Terminus Hotel, Cannon-street, on TUESDAY, the 29th December, 1874, at One o'clock P.M., for the purpose of receiving the directors' report, with balance-sheet and statement of accounts, for the election of directors and auditors, and for transacting the ordinary business of the company.
By order of the Board, T. G. GILLESPIE, Secretary.
11, New Broad-street, E.C., December 12, 1874.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN THE MATTER OF THE COMPANIES ACT, 1862, and of the NEW WHEAL LOVELL MINING COMPANY.—Notice is hereby given, that a PETITION for the WINDING-UP of the ABOVE-NAMED COMPANY by the PETITIONER, on the 15th day of December instant, presented to the Vice-Warden of the Stannaries by Frederick Vivian Hill, of Helston, within the said Stannaries, gentleman, a shareholder of the said company, and that the said petition is directed to be heard before the Vice-Warden, at the Prince's Hall, in Truro, within the said Stannaries, on Wednesday, the 6th day of January next, at Twelve o'clock at noon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioner, his solicitors, or their agents, of his intention to do so, such notice to be forthwith forwarded to P. P. Smith, Esq., Secretary of the Vice-Warden, Truro. Every such contributory or creditor is entitled to a copy of the petition and affidavit, verifying the same from the petitioner, his solicitors, or their agents, within 24 hours after requiring the same, on payment of the regulated charge per folio. Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before the 2nd day of January next, and notice thereof must at the same time be given to the petitioner, his solicitors, or their agents.

HODGE, HOCKIN, AND MARRACK, Truro, Cornwall (Petitioner's Solicitors).
GREGORY, ROWCLIFFES, AND RAWLE, 1, Bedford-row, London (Agents of the said Solicitors).
Dated Truro, December 17th, 1874.

THE COMPANIES ACT, 1862 AND 1867.
IN THE MATTER OF THE PHENIX SILVER-LEAD MINING COMPANY (LIMITED).

THE LIQUIDATOR of the above-named company invites TENDERS for the PURCHASE of the WHOLE of the PROPERTY belonging to the said company, comprising the company's interest in the leases of the VALUABLE MINES known as the PHENIX SILVER-LEAD MINES, situated in the parish of Perranzabuloe, in the county of Cornwall, which have been extensively developed; together with the whole of the valuable plant and machinery, comprising—

66 inch cylinder PUMPING ENGINE, with two 14 ton tube BOILERS.
42 inch cylinder PUMPING ENGINE, with one 11 ton BOILER.
26 inch cylinder STEAM WINDING ENGINE, with CAPSTAN and 10 ton BOILER complete.
26 inch CORNISH CRUSHER complete.
A very large quantity of valuable PUMPS and PITWORK.
All the underground MACHINERY, RAILS, TRAMS, &c.
The complete MACHINERY on surface and DRESSING APPARATUS.
BUILDINGS, STOREHOUSES, WORKSHOPS, STABLES, &c.
The mines have been opened to a great extent, and considerable quantities of ore sold, and they are supplied with all the necessary machinery for further development.
Tenders, addressed to the Liquidator, should be sent in not later than the 24th day of January, 1875.
Permission to inspect the mines and the leases, together with full inventory of plant and machinery, conditions of sale, and all other particulars, may be obtained of the Liquidator.
25, Bucklersbury, London, E.C. FREDERICK WARWICK.

VALUABLE IRON, TIN, AND COPPER MINES IN WEST CORNWALL FOR SALE.

MR. JOHN MATHEWS WILL SELL, BY AUCTION, at the Western Hotel, Penzance, on Thursday, the 31st day of December next, at Three o'clock in the afternoon, in One Lot, as a going concern, the WHOLE of the MACHINERY and MATERIALS, together with the SEVERAL MINING LEASES or SETTS of the TREBARVAH MINES, situated in the parish of Perranzabuloe, near Marazion.

The MACHINERY comprises the following, namely:—48½ in. cylinder, 7 ft. stroke PUMPING ENGINE, with 12 ton BOILER; 16 in. cylinder, 4 ft. stroke STEAM WHIM, with 8 ton BOILER; cage and wire-rope complete; shears and capstan, with wire-rope, 50 fms. 14 in. pitwork, and 15 fms. 7 in. in engine-shaft, with 10 fms. 12 in. pitwork in Richards' shaft, with 40 fms. flat-rod underground and 12 fms. 13 in. pumps at surface; skip-road in Richards' shaft, with stands, shies, and shaft tackles at surface, together with a variety of miscellaneous articles. There is also an excellent account-house, together with smiths' shop and carpenter's shop, as well as material, powder, and dressing houses, with extensive copper ore floors.

The whole of the machinery is in first-rate condition, and ready to be set to work at once.
The various levels from the adit to the 60 have been cleared, and 117 tons of copper ore, 1300 tons of white spathose iron ore, and 298 tons of tinstuff have been raised to surface and sold. There is a good lode of copper ore now standing above the 60, west of Richards' shaft, and copper may also be expected in the 50 by driving a few fathoms further west of engine-shaft. There are several other valuable lodes known to exist in the sett.

Any further information may be obtained from Messrs. BRANSON and SON, Solicitors, Sheffield; Mr. S. H. F. COX, St. Columb; or of the Auctioneer; or at the offices of Mr. W. TRYHALL, Solicitor, Penzance.
Dated 16th November, 1874.

FREEHOLD ESTATE and HEMATITE IRON MINES, AT PARKSIDE, FRIZINGTON, CUMBERLAND.

TO BE SOLD, BY PUBLIC AUCTION, at the Albion Hotel, King-street, Whitehaven, in the county of Cumberland, on Wednesday, the 27th day of January, 1875, at Three o'clock in the afternoon, all the ancient enclosed portions of the FREEHOLD ESTATE called PARKSIDE, in the township of Frizington, in the parish of Arlecdon, in the county of Cumberland, containing 19 A. 3 R. 2 P. or thereabouts, now in the occupation of Mr. George Graham, as farmer; together with the valuable MINES and ROYALTY of HEMATITE IRON ORE and LIMESTONE within and under the same, being portions of the mines known as

THE PARKSIDE MINES, now in the occupation of the Parkside Mining Company, under a lease thereof, which will expire on the 26th day of June next.
These well-known and productive mines have been successfully worked by the present lessees for 20 years and upwards, and are still producing large quantities of the best Cumberland hematite ore. The royalty is surrounded by some of the most valuable iron mines in the district, and has only been partially explored, and affords an excellent opportunity for the profitable investment of capital.
The allotments of common belonging to the estate adjoining the Frizington Road, and containing 4 A. 3 R. 4 P., are not included in the present sale.
The farmer will show the land.
The property will be offered for absolute sale in the usual way, but if not sold will then be offered on a lease for 1000 years, subject to royalty rents of 2s. per ton for all iron ore, and 2d. per ton for all limestone to be worked out of the estate.
The person offering the highest premium to be the lessee.
Conditions will be produced at the sale; and, in the meantime, further information may be had on application to Messrs. WILLIAM and ISAAC PORTER, Egremont; JOSEPH PORTER, Whitehaven; or at the offices of Messrs. LUM and HOWSON, Whitehaven, where a plan of the property may be seen, and copy of conditions had before the sale.

JOHN FARQUHARSON, Auctioneer.

TO CAPITALISTS.
FOR SALE, IN NEW SOUTH WALES, —
1340 ACRES TIN LANDS.—Lode and Stream.
2430 ACRES COPPER LANDS (portions freehold).
2112 ACRES IRON AND COAL.
2250 ACRES COAL (on sea coast).
4000 ACRES COAL (inland, on railway line).
200 ACRES KEROSENE SHALE.
200 ACRES PLUMBAGO.
105 ACRES FREEHOLD GOLD DEPOSIT (Brown's Creek).
The above properties are all first-class, and on or near railway lines or water carriage, and are the very "pick" of their respective districts (being some of the first selections made).
Liberal terms, either as to purchase or working on royalty, will be given to parties able to carry out arrangements.
Apply to the owner.—
CHARLES W. WEEKES, Circular Quay, Sydney, N.S.W.

CORNISH ENGINES.
FOR SALE: —
ONE excellent 70 in. CORNISH PUMPING ENGINE, 10 ft. stroke, with metallic piston, with or without three boilers, 13 tons each, with fittings.
ONE good 73 in. CORNISH BEAM ENGINE, 10 ft. stroke, with inverted cylinder.
ONE superior 50 in. CORNISH PUMPING ENGINE, 10 ft. stroke.
ONE first-class 28 in. WINDING ENGINE, 6 ft. stroke, suitable for a colliery, with drum.
ONE very good 30 in. horizontal WINDING ENGINE, 10 ft. stroke.
PUMPS of all sizes; CORNISH CRUSHERS; BOILERS from 6 to 12 tons; and LARGE STOCK of MATERIALS and tools in mines.
Apply to F. W. MICHELL and Co., Mine Material Depot, East Carr Brea, Redruth, Cornwall.

TWO HUNDRED horse power indicated BEAM STEAM ENGINE FOR SALE, SECOND-HAND.
Can be seen working on application to GEORGE LEACH and Co., Britannia Works, near the Railway Terminus, Leeds.
Is being sold to make room for an engine of greater power. Stroke, 7 ft., cylinder jacketed, D valves, fly-wheel 28 ft. diameter, 16 tons. Total weight about 50 tons. Ashlar foundations will be sold with engine.

FOR SALE, a HORIZONTAL HIGH-PRESSURE ENGINE, 13½ in. cylinder, 24 in. stroke; HORIZONTAL HIGH-PRESSURE ENGINE, 14 in. cylinder, 30 in. stroke; and a PAIR of GUN-METAL PUMPS, 6 in. diameter, 12 in. stroke; also, a TUBULAR BOILER, up to 60-horse power, of Yorkshire plates throughout.
Apply to W. T. HENDRY and Co., 2, Wilson street, London E.C.

FOR SALE, CORNISH ROTARY ENGINE, 38 in. cylinder, two fly wheels, about 20 tons; TWO BOILERS, 20 tons; THREE STAMPS AXLES, five cams to the round, two sets complete, with lifters, &c., for stamping. To be sold together or separately.
Apply to Mr. HOWARD, Auctioneer, St. Columb, Cornwall.

CONTRACT FOR ENGLISH ELM TIMBER.
CONTRACT DEPARTMENT, ADMIRALTY, WHITEHALL, S.W.,
December 18th, 1874.

TENDERS will be RECEIVED on THURSDAY, 7th January, 1875, until Two o'clock, for
ONE THOUSAND NINE HUNDRED LOADS OF ENGLISH ELM TIMBER.

Their Lordships do not bind themselves to accept the lowest or any tender. A Form of Tender, containing all particulars, may be obtained at this office.
FRANCIS W. ROWSELL, Superintendent of Contracts.

GIRVAN AND PORT PATRICK JUNCTION RAILWAY.

THE DIRECTORS are prepared to RECEIVE TENDERS for the following PERMANENT-WAY MATERIALS (Terms cash): —
RAILS, about 2000 tons, and proportionate quantities of CHAIRS, FISH-PLATES, BOLTS, SPIKES, to be delivered in equal quantities on 1st April and 1st May next.

The particulars may be obtained from JOHN MACRAE, Esq., C.E., 107, Princes-street, Edinburgh, and sealed tenders are to be forwarded to HUGH MACLEAY, Solicitor, Stranraer, the solicitor of the company, on or before the 2nd day of January, 1875.
The directors do not undertake to accept the lowest or any tender.
Office of the company, Stranraer.

A GOOD INVESTMENT.

PARTNERSHIP WANTED in an OLD-ESTABLISHED FOUNDRY in the WEST OF ENGLAND, doing a good and profitable business, which may be increased to a very large extent on the introduction of more capital; 80 to 100 men might be employed in the present buildings. The machinery is in good working order, driven by water power, and capable of manufacturing a 60-inch engine and other heavy work.
The premises are alongside a tidal river, and barges of 30 tons can discharge in front of the foundry. There is also a wharf adjoining, extensive enough to carry on a large general trade in timber, coal, iron and ship-building, and water-power for driving saw or bone mills.

Application to be made, not later than the 1st of January next, to "A. B. C.," MINING JOURNAL Office, 25, Fleet-street, London.

LEAD MINING PROPERTY.

THE ADVERTISER is OPEN to SELL or JOIN in the PROMOTION of a COMPANY for WORKING a DESIRABLE PIECE of MINING GROUND, only partially developed, which has produced many hundred tons of SILVER-LEAD ORE. Locality good, lodes being those of the Lisburne Mines, and almost the nearest parallel ones to Grogwinion lodes.
For particulars as to machinery, &c., apply to "Miner," Post Office, Aberystwith.

TO CAPITALISTS.

A COLLIERY OWNER in SOUTH WALES desires the CO-OPERATION of ONE or MORE CAPITALISTS in DEVELOPING the valuable ABERDARE STEAM COAL MEASURES in his property. The collieries are now working sufficient to yield an immediate return on the capital invested.
Apply to J. D. BLAKE, Solicitor, 5, Bell-yard, Doctor's Commons, London.

SWEDISH AND SCOTCH PIT PROPS, MINING TIMBER,

LARCH AND FIR CROSSED SLEEPERS,
LARCH AND FIR TRAMS, DEALS, &c., of all kinds and dimensions,
of best quality and lowest prices—FOR SALE.
Apply to—
THOMAS ATKINSON,
1, SPICER LANE, QUAYSIDE, NEWCASTLE.

ON SALE, TWO CORNISH BOILERS, 30 ft. by 7 ft. diameter.
Two flues through each. Safe at 60 lbs. pressure working.
Apply to HENRY PARKINSON, Foundry-street, Bolton.

ON SALE, ONE PAIR of 18 in. high pressure HORIZONTAL ENGINES, for winding, fitted with slot link motion. First-class pair of engines.
Apply to HENRY PARKINSON, Foundry-street, Bolton.

ON SALE, ONE PAIR of 15 in. HORIZONTAL WINDING ENGINES, with slot link motion. Will be sold cheap.
Apply to HENRY PARKINSON, Foundry-street, Bolton.

ON SALE, ONE 25-horse power double cylinder PORTABLE ENGINE, fitted with slot link motion for winding.
ONE 20-horse power double cylinder PORTABLE ENGINE.
Will be sold cheap, and are in first-class order.
Apply to HENRY PARKINSON, Foundry-street, Bolton, Lancashire.

ON SALE, ONE 8-horse power PORTABLE ENGINE, fitted up with winding drum; slot link motion; made by Clayton and Shuttleworth. Price £130.
Apply to HENRY PARKINSON, Foundry-street, Bolton.

ON SALE, ONE PAIR of 25-in. coupled HORIZONTAL WINDING ENGINES, with drums and brake gear. Also, ONE PAIR of 22 in. ditto. Will be sold cheap.
Apply to HENRY PARKINSON, Foundry-street, Bolton.

ON SALE, ONE STRONG WELL-BUILT CONDENSING BEAM ENGINE, by a first-class maker, equal to new; cylinder, 36 in. bore, 5 ft. stroke. Can be seen standing, and will be sold cheap.
ONE close-built self-contained CONDENSING BEAM ENGINE, stands on independent bed on six columns; cylinder, 28 in. bore, 4 ft. stroke. As good as new. Can be seen standing, and will be sold cheap.
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BOILERS ON SALE.—FOUR GALLOWAYS PATENT BOILERS, 30 ft. by 7 ft., safe to work at 70 lbs. on the square inch.
TWO BOILERS, 28 ft. by 7 ft., with two flues through.
TWO BOILERS, 26 ft. by 7 ft., two flues through.
ONE BOILER, 20 ft. by 7 ft., two flues through.
ONE BOILER, 18 ft. by 6 ft. one flue through. Also, several smaller sizes.
Apply to HENRY PARKINSON, Foundry-street, Bolton.

ON SALE, ONE 16-horse power double cylinder PORTABLE ENGINE, for winding.
ONE 12-horse power PORTABLE ENGINE.
ONE 10-horse power PORTABLE ENGINE.
ONE 8-horse power PORTABLE ENGINE.
ONE 6-horse power PORTABLE ENGINE.
Equal to new, and will be sold cheap.
Apply to HENRY PARKINSON, Foundry-street, Bolton.

ON SALE, ONE PAIR of 25-in. HORIZONTAL WINDING ENGINES.
ONE PAIR of 18 in. HORIZONTAL WINDING ENGINES.
ONE PAIR of 16 in. HORIZONTAL WINDING ENGINES.
ONE PAIR of 15 in. HORIZONTAL WINDING ENGINES.
ONE PAIR of 12 in. HORIZONTAL WINDING ENGINES.
ONE PAIR of 10 in. HORIZONTAL WINDING ENGINES.
ONE PAIR of 7 in. HORIZONTAL WINDING ENGINES.
The above engines are now ready for delivery, and fitted with winding drums and brake gear to each pair of engines.
Apply to HENRY PARKINSON, Foundry-street, Bolton.

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POST OFFICE LONDON DIRECTORY FOR 1875 (76th year), price 40s., with corrected MAP.
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NEW MAPS OF THE SIX HOME COUNTIES, size 38 in. by 25, showing, in addition to the towns, all the villages, railways, &c. The prices of each county map are—Sheet, 3s. 6d.; in case or on roller, 10s.; or the set of six—sheet, 15s.; in case, 42s.; on rollers, 45s.

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SIMPKIN, MARSHALL, and Co.; and all Booksellers.

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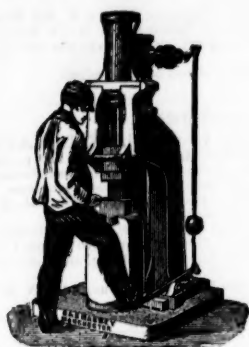
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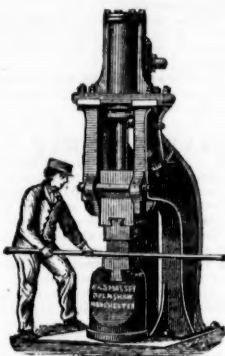
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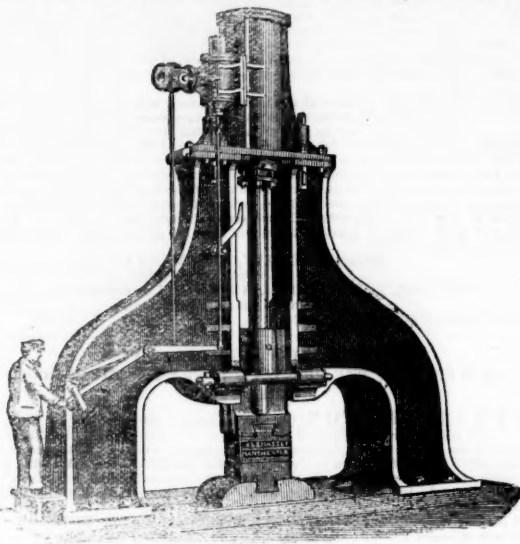
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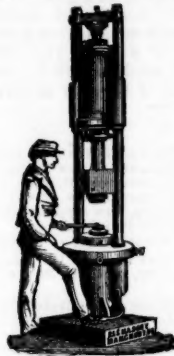
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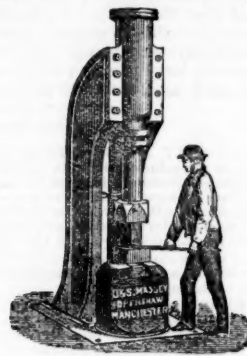
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Steam Hammer for Heavy Forging.



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From 60 to 100 Steam Hammers and Steam Stamps may usually be seen in construction at the Works.

SPECIAL STEAM STAMPS, of great importance for Forging, Stamping, Punching, Bolt-making, Bending, &c. STEAM HAMMERS for Engineers, Machinists, Ship-builders, Steel Tilters, Millwrights, Copper-smiths, Railway Carriage and Wagon Builders, Colliery Proprietors, Ship Smiths, Bolt Makers, Cutlers, File Makers, Spindle and Flyer Makers, Spade Makers, Locomotive and other Wheel Makers, &c.; also for Use in Repairing Smithies of Mills and Works of all kinds; for straightening Bars, bending Cranks breaking Pig-iron, &c.

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AN INDISPENSABLE APPENDAGE TO STEAM BOILERS.



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In operation to
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Is the CHEAPEST and MOST POWERFUL EXPLOSIVE for every kind of MINING and QUARRYING OPERATIONS; for blasting in hard or soft, wet or dry ROCKS; for clearing land of TREE ROOTS and BOULDER STONES; for rending massive BLOCKS of METAL; for SUBAQUEOUS and TORPEDO purposes; and for recovering or clearing away of WRECKS, &c.

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For every kind of Smiths' Work, from the large fire with triple blast, for heavy forgings, to the smallest rivet hearth.

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PORTABLE FORGES

(Four sizes), each complete and self-contained, with a blower which—unlike a fan—is rotated at a slow speed only. These forges are useful either as permanent workshop tools or in colonies, steam-ship engine-rooms, and other places when no steam power or fixed fan is available. Entirely supersedes the use of bellows. Illustrated Price Lists post free on application.

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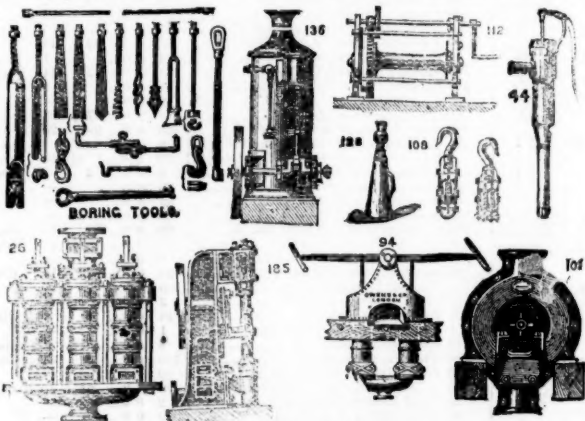
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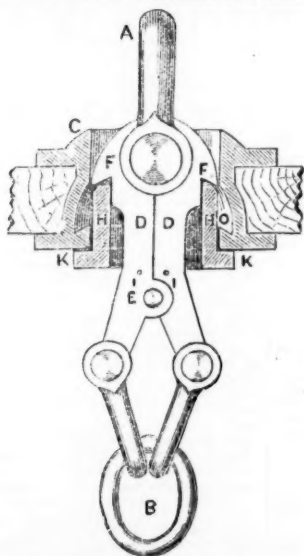
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NON-DIVIDEND MINES—Continued.

NON-DIVIDEND MINES—Continued.				
Shares.	Mines.	Paid.	Last Pr.	Clos. Fr.
3000	West Wheel <i>Argus, t, c, Laland</i>	1 10 6	—	—
6000	West Wheel <i>Goldland, t, c</i>	3 14 0	—	—
282	West Wheel <i>Seton, c, Camborne</i>	55 15 0	25	23 25
4000	Wheel <i>Agar, c, Illogan</i>	10 0 0	1½	1½ 1½
5000	Wheel <i>Allen, s, t</i>	1 0 0	—	—
6000	Wheel <i>Argus, t, Sancreed</i>	0 10 0	—	—
25000	Wheel <i>Arthur, t, c, Gyltas*</i>	1 0 0	—	—
741	Wheel <i>Basset and Grylls, t</i>	9 18 6	—	—
6000	Wheel <i>Comes, t, St. Agnes</i>	2 0 0	—	—
6000	Wheel <i>Croser, c, Tavistock</i>	4 1 0	—	—
5400	Wheel <i>Emm, c, Buckfastleigh</i>	1 10 0	1½	¾ 1½
5179	Wheel <i>Grenville, c, Camborne*</i>	9 7 6	6¾	5 5½
2048	Wheel <i>June, t, Kea</i>	2 13 10	4	4½
12000	Wheel <i>Jewell, c, Marazion</i>	1 1 0	—	—
12000	Wh. <i>Mary Hutchings, s, t, Plympton</i>	1 11 0	1½	1½ 1½
3000	Wheel <i>Peavor, t, Redruth</i>	5 7 6	6¾	5¾ 6¾
10000	Wheel <i>Ruby, t, Ludgvan</i>	1 0 0	—	—
1000	Wheel <i>Sparron, t, Redruth</i>	4 0 0	—	—
1000	Wheel <i>Swadwell, t, c, Breage</i>	1 0 0	—	—
4096	Wheel <i>Uny, t, Redruth</i>	12 6 0	8¾	8¾ 3¾
6000	Wheel <i>Vincent, t, Alternun</i>	1 11 0	—	—
12000	Willoughby, J., <i>Llanrwst</i>	2 10 0	—	—
1000	Wye Valley, J., <i>Montgomery*</i>	3 0 0	3¾	3¾ 3¾
1200	Zennor, t, <i>Cornwall</i>	5 0 0	—	10½

IRON AND COAL COMPANIES.				
Shares.	Company.	Paid.	Price.	
£15	Aislait Steel and Wire Co. [L.]	£10 0 0	10½	10½ dis.
5	Aitait Colliery Co. [L.]	5 0 0	¾	3d. par
100	Abbury Co. [L.]	90 0 0	44	34 dis.
10	Bagnall, Jordan, and Sons [L.]	10 0 0	3	2½ dis.
10	Benhar Coal Co. [L.]	10 0 0	4¾	4¾ pm.
50	Bilbao Iron Ore Co. [L.]	40 0 0	3¾	4¾ pm.
10	Bilston & Crump Meadow Coll. Co. [L.]	10 0 0	1	1½ pm.
25	Birmingham (Blakeley Hall) Coal and Ironstone Company [L.]	25 0 0	—	—
—	Ditto 10 p. et. bonds of £25 each	—	2	2½ pm.
4	Blaen Cwmbach Coal Co. [L.]	4 0 0	¾	1 pm.
50	Blenavon Iron and Steel Co. [L.]	37 10 0	—	—
50	Blackhair Iron Co. [L.]	30 0 0	—	—
100	Bolckow, Vaughan, and Co. [L.]	35 0 0	20	20½ pm.
30	Ditto ditto	30 0 0	18¾	19 pm.
5	Bowkling Iron Co. [L.]	50 0 0	25	30 pm.
5	Brynkaft Collieries [L.]	5 0 0	—	—
50	Britannia Ironworks [L.]	25 0 0	—	—
50	Brown, Bailey, and Dixon [L.]	40 0 0	25	24 dis.
100	Brown, John, and Co. [L.]	70 0 0	8	8½ pm.
20	Cammell and Co. [L.]	80 0 0	6½	6 dis.
30	Cannock and Huntington Coal [L.]	2 0 0	—	—
10	Cardiff & Swansea St. Coal Co. [L.]	10 0 0	¾	¾ dis.
10	Cardigan Steel and Wire Co. [L.]	7 10 0	6½	6½ dis.
10	Central Swedish Iron and Steel [L.]	10 0 0	4	6
5	Chapel House Colliery	5 0 0	¾ dis.	par
50	Charlton Iron Co. [L.]	35 0 0	19½	19 dis.
50	Chatterley Iron Co. [L.]	40 0 0	12	11½ dis.
10	Chillingworth Iron Co. [L.]	10 0 0	¾	5½ dis.
1	Clee Hill Colliery Co. [L.]	1 0 0	¾	¾ dis.
10	Consett Iron Co. [L.]	7 10 0	18¾	18¾ pm.
1	Consett Spanish Ore [L.]	1 0 0	—	—
50	Cooke, William, and Co. [L.]	20 0 0	6½	6½ dis.
20	Darlington Iron Co. [L.]	8 0 0	2	1½ dis.
10	Davis's Merthyr Colliery Co. [L.]	10 0 0	—	—
50	Davy Brothers [L.]	22 10 0	14½	15 pm.
50	Ebbw Vale Co. [L.]	29 0 0	7	6½ dis.
5	Fairbairn Engineering	5 0 0	2½	1½ dis.
10	Federal Mining Ass. [L.] (£1 returned)	9 0 0	8	10
10	Glasgow Port & Wharf [L.]	10 0 0	3¾	3¾ dis.
20	Great Western Coal Co. [L.]	17 0 0	—	—
2	Gwyns-willim Colliery Co. [L.]	2 0 0	—	—
15	Hopkins, Gilkes, and Co. [L.]	10 0 0	3	2½ dis.
10	Ifton Rhyn Colliery Co. [L.]	10 0 0	8	7½ dis.
50	Knowles, Andrew, and Sons [L.]	17 0 0	3½	4 pm.
10	Llay Hall Coal, Iron, & Firebrick [L.]	10 0 0	¾ dis.	par
5	Littledean Woodside Coll. Co. [L.]	5 0 0	—	—
10	Llangennech Colliery Co. [L.]	10 0 0	13	12 ½

Valley Col. Co. [L.] 15 p.c. pref. 10	0 0...	—	—
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10	Lydney and Wigpool Iron Ore [L.]	7	8 0.	2½	1½	dls.
10	Marbella Iron Ore Co. [L.]	10	0 0.	6	6½	dls.
10	Maryland Iron and Steel Co. [L.]	5	0 0.	¾	dis.	pm.
6	Mersey Steel and Iron Co. [L.]	3	0 0.	—	—	—
6	Mold Argued Colliery Co. [L.]	5	0 0.	par	¾	pm.
10	Monkland Iron and Coal Co. [L.]	10	0 0.	5½	6	pm.
10	Midland Iron Co. [L.]	5	0 0.	5½	6½	pm.
4	Mwynty Iron Ore [L.]	8	10 0.	1½	1	dls.
100	Nant-y-Glo and Blaitha (8 p. c. pref.)	100	0 0.	48	47	—
10	Neapsend Rolling Mills [L.]	3	0 0.	par	¾	pm.
1	Nerbudda Coal and Iron	0	8 0.	¾	¾	dls.
20	New Shariston Collieries [L.] Pref.	17	0 0.	8½	7½	dls.
10	Newport Abercrombie Coal Co. [L.]	5	0 0.	—	—	—
10	Newthampton Coal, Iron & Wagon [L.]	5	0 0.	—	—	—
10	Northfield Iron Co. [L.]	6	0 0.	1½	1½	dls.
35	Palmer's Shipbuilding and Iron [L.]	25	0 0.	7	6½	dls.
100	Parkgate Iron Co. [L.]	65	0 0.	23½	24½	pm.
20	Patent Shaft and Axletree [L.]	10	0 0.	5½	6	pm.
20	Pelsall Coal and Iron [L.]	15	0 0.	4	2	dls.
50	Phoenix Bessemer Co. [L.]	40	0 0.	16	15½	dls.
50	Rhondda Merthyr Coal Co. [L.]	50	0 0.	20	25	pm.
50	Rhymney Iron Co. [L.]	50	0 0.	38	40	—
10	Richards and Company [L.]	4	0 0.	¾	1	pm.
100	Samuel Fox and Co. [L.]	50	0 0.	42	44	pm.
100	Sandwell Park Colliery Co. [L.]	100	0 0.	—	—	—
50	Ditto	10	0 0.	—	—	—
50	Shotts Iron Co. [L.]	50	0 0.	27½	28½	pm.
100	Sheepbridge Iron and Coal [L.]	55	0 0.	29	29½	pm.
10	Sheffield Forge and Rolling Mill [L.]	2	10 0.	¾	¾	pm.
50	Silkstone & Dodworth Cl. & Iron [L.]	22	0 0.	¾	dis.	par
5	Silkstone Fall Colliery Co. [L.]	5	0 0.	4	3	dls.
20	Skerne Ironworks [L.]	20	0 0.	—	—	—
50	Someroostro Iron Co. [L.]	50	0 0.	—	—	—
20	South Wales Coal Co. [L.]	17	0 0.	—	—	—
100	Staveley Iron and Coal Co. [L.]	100	0 0.	59	60	pm.
100	Ditto ditto New	10	0 0.	9½	10½	pm.
10	Stranton Iron and Steel Co. [L.]	8	0 0.	—	—	—
20	South Cleveland Ironworks [L.]	20	0 0.	12	10	dls.
100	Thames Iron Company	100	0 0.	—	—	—
7½	Titanic Iron and Steel	5	0 0.	—	—	—

on Mining Co. [L.]	10	0	0...	1	1/2	dis.
Bituminous Collieries [L.]...	1	0	0...		-	

10	Vancouver Coal Co. [L.]	6	0 0 ..	¾	13½	pm.
100	Vickers, Sons, and Co. [L.]	100	0 0 ..	38	45	pm.
50	Welsh Ironworks Co. [L.]	50	0 0 ..	—	—	
25	W. Cumberland I. and Steel [L.]	25	0 0 ..	6½	5½	dis.
10	West Mostyn Coal [L.] (12 p.p. pref.)	2	0 0 ..	—	—	
10	Whitehaven Iron Co. [L.]	10	0 0 ..	—	—	
100	Wigan and Whiston Coal Co. [L.]	70	0 0 ..	—	—	
100	Wigan Coal and Iron Co. [L.]	75	0 0 ..	—	—	
WAGON COMPANIES.						
10	Birmingham Wagon Co. [L.]	10	0 0 ..	17½	18½	pm.
20	British Wagon Co. [L.]	10	0 0 ..	4½	4½	pm.
10	Gloucester Wagon Co. [L.]	10	0 0 ..	4½	4½	pm.
10	Metropolitan Wagon Co. [L.]	10	0 0 ..	5½	5½	pm.
50	Midland & Great N. W. [L.]	50	0 0 ..	90½	91½	pm.
20	North Central Wagon Co. [L.]	20	0 0 ..	10½	10½	pm.
10	North of England Wagon Co. [L.]	3	10 0 ..	par.	¾	pm.
10	Parkgate Wagon Co. [L.]	5	0 0 ..	3½	3½	pm.
10	Scottish Wagon Co. [L.]	10	0 0 ..	1	2	pm.
20	Sheffield Wagon Co. [L.]	15	0 0 ..	4½	5	pm.
10	Yorkshire Wagon Co. [L.]	10	0 0 ..	4½	5	pm.
TELEGRAPH COMPANIES.						
*Bt.	Anglo-American	100	0 0 ..	73	73½	
10	Brazilian Submarine	10	0 0 ..	73	7½	
10	Cuba, 10 per cent. preference	2	10 0 ..	53½	6½	
20	Direct United States Cable	20	0 0 ..	103½	11½	
10	Eastern, 6 per cent. debentures	10	0 0 ..	75½	7½	
10	East. Exten., Australia and China	10	0 0 ..	75½	7½	
10	Globe Telegraph and Trust	10	0 0 ..	65½	65½	
10	Ditto, 5 per cent. preference	10	0 0 ..	8½	10½	
10	Great Northern	10	0 0 ..	11	11½	
25	Indo-European	25	0 0 ..	17	18	
10	Mediterranean Extension	10	0 0 ..	3½	4½	
10	Ditto, 5 per cent. preference	10	0 0 ..	10½	11	
5	Reuters	8	0 0 ..	11	11½	
*Bt.	Submarine	100	0 0 ..	308	311	
10	West Indian Cables	10	0 0 ..	33½	34½	
20	Western and Brazilian	20	0 0 ..	113½	12½	
*1000	Western Union, 7 per cent. Mort. Bonds	1000	0 0 ..	102	104	
MISCELLANEOUS.						
10	Anglo-Mexican Mint	10	0 0 ..	6	7	
25	Copper Miners of Eng. (7 p.e. pref.)	25	0 0 ..	9½	10½	
5	Diamond Rock Boring	4	0 0 ..	¾	dis.	par
5	Gen. Phos. & Chem. Works Co. [L.]	5	0 0 ..	—	—	
1	Grindale Whinstone Quarry	1	0 0 ..	—	1 1½	
10	Huntington Copper and Sul. Co.	8	0 0 ..	6	5	dis.
10	Silver Hill (ord. sh.)	10	0 0 ..	7	8	
10	Tharshi Sulphur and Copper Co.	10	0 0 ..	26	26½	

b, blende; cl, coal; c, copper; g, gold; l, lead; s, silver; st, slate;
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